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—Dream and Reality

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—The New Millennium Issue in Maharashtra

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Indian Education in 2000 A.D. Dream and Reality

Om Prakash*

The Millennium Excitement

Idioms referring to imminence of the twenty first century have been in vogue for more than two decades past. Frequent use of such idioms robbed them of the excitement they aroused initially, so that the fashion now is to talk of advent of the new millennium. The suggestion seems to be that with change in the century or millennium, everything old and outdated would be left behind. The jerk in the habit of counting years from the series of nineteen hundred to the series of two thousand would be so strong that our entire mindset would be shaken out of the rut and for the better. The necessity of introducing new programmes in computers to overcome the Y2K bug would make us see the wisdom of adopting new pattern of thought and habit of action in all other spheres as well. Consequently, there would be quantum jump forward in our policies and practices in socio-economic-industrial sphere also, including in the sub-system of education, so that we would be able to respond to accumulated and emerging challenges.

A sane minority never expected any miracles to happen merely with the change of calendars, but optimistically hoped that the nation would grow wiser in thought, mature in experience, sincere in purpose and honest in action with every passing day, week, month and year of its regained independence. Fifty years should be a sufficiently long time for our ancient country for understanding the problems that confront us and for commencing earnest action to sort them out. If these fifty years happen to be almost co-terminus with the twentieth century and the second millennium, so far so good for enjoying the excitement as far as this be innocuous and free from any suggestion of miracles. With such optimism in mind and idealism in heart, thinkers have been making projections of our achievements that sound like their dreams. One such dream was narrated by the late Professor V.V. John in the essay "Indian Education in 2000 A.D." included in his book *The Great Classroom Hoax and Other Reflections on Indian Education*, published by Vikas Publishing House Private Ltd., in the year 1978. This essay deserves to be recalled and re-read in the actual year 2000 A.D., so that we may realise how far behind we are from the expectations that had been made of us and we may resolve to make up the deficiency. It may be briefly mentioned that the late Professor V.V. John was an eminent educationist, enchanting orator and charming author of our times, who is fondly remembered more as a former Principal of the Government College, Ajmer than as an ex-Director of Education, Rajasthan and an ex-Vice Chancellor of the University of Jodhpur. This essay is in narrative mode in the past tense, as if its author's dream has already turned into reality and is so observed and reported by an imaginary commission on education. All

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quotations in the sequel are from this essay and are respectfully acknowledged.

Futility of Commissions

The essay begins with a subtle satire on futility of setting up large commissions on education and expecting them "to settle educational issues finally" or to "find answers that would be valid for all times". The commission of Professor John's imagination, set up in the year 1999, consisted of only three scholars, and it submitted its report in a few weeks time. It did not have to get the data collected and processed by special 'task forces'; for, there was not only a system of continuous inflow and analysis of data but also of "continuous study of country's policies and practices in education". The first part of this dream — continuous collection and processing of data — should soon be a reality with advances in information technology, but are we anywhere near developing the courage of creating, for the benefit of decision makers, a system of studying country's (and states') policies and practices in education continuously and objectively? On the contrary, our system is getting more and more politicised and many 'educationists' seem to be too eager to don the colours of different political parties and willing to colour their observations and opinions accordingly. Decisions on educational matters may be seen being taken not on merit and academic considerations but on populist considerations of furthering party interests. Professor John makes a passing reference to the fact of the ponderous report of the Education Commission 1964-66, and the consequent Education Policy Resolution of 1968, having little impact on the Indian education system. The essay was written before the National Policy of Education, 1986 saw the light of the day, so leaves us alone to judge its impact. This Policy was formulated with much fanfare, announced with a bang, but was subjected to reconsideration, then was resurrected and has now been reduced to a whimper by successive central governments. A suggestion, circulating these days in corridors of power, is that higher education is not a 'merit good' and deserves neither subsidy nor any priority on state agenda and could well be left to be taken care of by the market forces in a shrinking world of free trade.

Three Language Formula

Professor John hoped that the language controversy, that evoked fierce excitement in the sixties, and was swept under the carpet then, would get resolved convincingly before the close of the

twentieth century. The commission of his imagination recorded, "The solution was based on the recognition that not all Indians need three languages of the three language formula in any of its different versions. Many did not need even two; and some may need more than three... There were no compulsions in regard to this language formula; facilities for learning Indian and foreign languages were liberally provided." "No longer was it necessary to prescribe even at the university level elementary courses in the mother tongue, and in the second and third languages of study, for which provision had already been made in elementary and secondary school". But in reality, we do not seem to have yet gathered the courage of cleaning the carpet and sweeping the dust aside. We still profess to observe the three-language formula, albeit in its watered-down form, and continue teaching General Hindi and General English in the degree courses as 'compulsory' subjects

Job-Oriented Education

The core of Professor John's dream was that the confusion and indecision about 'vocational' and 'job-oriented education' that got introduced with the 'ten plus two plus three' pattern would disappear before the close of the twentieth century. The commission of his imagination noted, "A serious impediment to its successful implementation was the sort of glib nonsense that was put forth as one of the chief objectives of the new pattern; the idea, it was claimed, was to 'siphon off' (that was the ugly phrase used) large numbers at the end of 'plus two' level into employment, so that only the academically competent would proceed to the university. The zealots of the new pattern initially ignored the two requisites for the success of the programme. One was an equitable wage policy in the country; the other was the abandoning of degree requirements for jobs in public service for which competitive proficiency tests could be arranged". The imaginary commission went on to note that as a welcome consequence of delinking degrees with jobs, "universities came to hold fewer and fewer examinations of their own, ... Such external tests as were deemed necessary for the maintenance of common standards, were looked after by a national network of examinations, that functioned outside the university system."

The hard ground realities at the turn of the century are quite contrary to the dreams of thinkers of yore. The wage system is no more equitable today than it was some decades ago. The disparity

between lowest and highest salaries of government employees is more than the norm of one and ten; managers in multinational companies are earning many times more, non-taxable perks of 'peoples representatives' do not, in any way, reflect the poverty of the 'people' they claim to represent, at least one-third of whom subsist below the poverty line. No concrete steps have yet been taken in the direction of delinking degrees with jobs either, although the National Policy of Education, 1986 swore by this principle both in its original as well as the revised versions. There is yet no proposal of setting up a national network for conducting examinations and universities are in no danger of losing this business. Instead of remaining teaching-learning institutions, universities are turning more and more into examining bodies. These days 'academic session' not only ends with annual examinations, but also begins with admission tests conducted by institutions individually or collectively. The success of universities is measured not in terms of facilitating learning and research but in terms of 'timely' declaration of examination result, even if this be at the cost of their credibility. The increasing obsession with degrees has partly legitimised the old obnoxious system of capitation fees for admission in its new form of payment seats in institutions teaching professional courses. Consequence may be seen in the form of a mushroom growth of institutions claiming to provide technical and management education and awarding their own diplomas. Foreign institutions are also setting shop and establishing franchises, obviously with a motive of making money.

Professor John dreamt that the question: "at what stages, and in what areas, and for what groups, should vocational education be ordained", would become obsolete and irrelevant much before the close of the twentieth century. He hoped that sagacity would be brought about by realization such as the following: "If the young were trained for jobs, and if the jobs were not there when they emerged from school and college, what would happen? If a young man were trained for a particular job, would he not be stuck with it for life, and would job-orientation be the educational equivalent of the caste system? All that the sensible advocates of vocational education said was that education should equip one for the twofold exigencies of life, namely, confrontation with ideas, and the obligation to make a contribution to the common wellbeing". Unfortunately this wis-

dom does not seem to have dawned upon the "zealots" even by the dawn of the new millennium. Jobs are becoming more and more scarce, and the problem of unemployment is becoming more and more acute. Instead of pressing for an in-depth review of economic and industrial policies, the demagogues find it more convenient to indulge in education bashing. The result is the contradiction of, on the one hand, seeing the failure of vocational stream of education at the 'plus two' stage, particularly in states like Rajasthan where it has been almost abandoned; but on the other, 'experts' advocating inclusion of a job-oriented subject among the three subjects students are conventionally required to offer for their first degree examination. The effort seems to be of tempting the youth to accept two unattractive (non job-oriented?) subjects with the bait of a job-oriented subject. Is this a compromise between the twin objectives of retaining teachers of conventional subjects in employment and helping the taught in finding jobs? Otherwise, why should students be not permitted to offer all three job-oriented subjects, or to offer a shorter but intensive course in one such subject only?

Gandhian Philosophy

Professor John was hardly known as a 'Gandhian', but the following words in the report of the commission of his imagination reveal the depth of understanding and faith he had in Mahatma Gandhi's philosophy of education: "A history of India's education in the last half century could perhaps be written in terms of (1) how Mahatma Gandhi was misunderstood, (2) how he was explained away, and (3) how he was re-discovered.... The Gandhian teaching was an insistence that education should integrate learning to be with learning to do". How exhilarating it is to note that Professor John had identified these ingredients — learning to be and learning to do — in Gandhian thought at least two decades before they gained acceptance in 1996 UNESCO Report, *Learning: The Treasure Within* popularly called the Delors Reports. He was too familiar with our habit of ignoring indigenous ideas, so that he made his imaginary commission note as follows: "It was only in the last decades of the century that Gandhi's ideas were re-discovered, and not until radical educational thinking was imported from abroad, and its strange similarity to what Gandhi thought in spite of the UNESCO Commission report? The current scheme of vocational education, discussed above in brief, totally misses this philosophy. Earlier, so-called 'basic education' was made a laughing stock by its ad-

vocates by their misplaced insistence on the crafts of spinning and paper-modeling. Although spinning was dear to the Mahatma, he never said that 'doing' would not transcend spinning or that imparting skills in other trades and crafts and proficiency in other professions could be ignored. His concern was to promote dignity of labour by involving all those who are not directly engaged in any craft, including women in homes.

Liberated Education

Superficially, we are close to Professor John's projections only in the matter of spread of open system of education. But it needs to be sincerely examined whether this system is being propagated by way of "true liberation of the education system", or merely as a necessity to divert those who are not absorbed by the formal system in spite of unbridled growth in the number of universities and colleges. We may only hope cautiously that this necessity would turn into a virtue and that proliferation of ill-equipped 'open universities' would not give rise to paralled structures with equally rigid territorial and other boundaries, diluting standards in the name of liberalisation or liberation, whichever word be more fashionable

Universal Literacy

Even three decades ago, "educational planners had thrown up their hands in despair and reconciled themselves to the prospect of the century closing with more illiterates in the land than ever before". Professor John had dreamt that recalling such fears would be "a matter of amusement" in the year 2000 A.D. Unfortunately, the reality is that the fear has been proved correct! More unfortunate is the fact that we are nowhere near starting at the point suggested by him in this essay. In his imaginary success story, "The starting point, surprisingly, was a firm refusal to equate being literate with being educated. Once it was acknowledged that one could be educated without being literate, the true user of literacy became clearer. Learning to read and write became an adjunct to learning many things one needed to learn even more essentially... People were encouraged, not so much as a part of education, but as a part of social revolution, to study their own social and economic problems, and examine for themselves matters of vital concern to their lives and their living". Instead of adopting the line of bringing about a social revolution, the talk today is of enacting legislation to declare primary education a fundamental right and to make it compulsory. Who is going to be, and is in need of being, compelled and by whom? And what

is the safeguard against the masses being compelled by such legislations to accept all kinds of apologies for education? Already, prevailing patterns of elementary education are highly inequitable. The urban children are saddled with heavy school bag from the tender age of two years and a half. They are subject to tuitions, home work assignments and frightening tests and periodical examinations in three years of nursery and K.G. classes by teachers who are hardly aware of the philosophy of 'kindergarten'. Children from less privileged sections begin learning alphabets of their mother tongue at the age of six, on joining government schools. They receive only fleeting attention from teachers handling three or more classes in 'single teacher schools' and enjoy unwanted holidays when the teachers are engaged in any one of their many other assignments from revision of voters list to counting cattle. The impact of this initial inequality persists all along. Now we hear a talk of promoting 'informal learning' at the hands of untrained, ill-paid locally available 'volunteers' in hamlets and tribal areas. It may be pardonable to adopt this strategy for eradication of illiteracy, but it cannot be accepted as any model of compulsory education our governments might be thinking of offering in recognition of a fundamental right.

Fresh Resolve

This brief recollection of a dream seen a quarter century ago should awaken us to the hard reality that our performance in the field of education has been far below the expectations. Only optimism prevents us from wondering whether we are progressing at all. At least it may be admitted that we are not running at a speed which is faster than the rate at which our problems are growing, so that in relative terms, we are more backward than ever before. Unfortunately, backwardness is not longer a stigma in our country, in which larger and larger sections of society are being misled to clamour for the 'privilege' of being declared backward! The revolutionary and equalising role of education has still not touched them. At the turn of the century or the millennium, whatever we may choose to call it, let us not stop at making pious resolutions only. Although time is the vehicle of all change, change does not come merely with the striking of clocks, ringing of bells or replacement of calendars. We have remained status quoist for far too long. Let us now show the courage of admitting errors in our earlier arguments and mistakes in past planning, and proceed to make amends and innovations with idealism in thought, optimism in vision, sincerity in planning and honesty in implementation. □

Autonomy to Colleges

The New Millennium Issue in Maharashtra

M.R. Kurup*

A Case for Autonomy

The Kothari Commission had recommended setting up of Autonomous Colleges way back in mid-1960s, but the growth has been painfully slow largely due to the apathy of the UGC, universities and the state government on the one hand and the opposition by the organized teachers' unions on the other. The Maharashtra Universities' Act, 1994, has empowered the university to designate an affiliated degree college as autonomous in accordance with UGC guidelines and the Statutes. Such a college shall have full academic, administrative and financial autonomy, subject to the provisions of the Act and Statutes. Permanently affiliated colleges with 10 years of standing and having attained high academic and administrative standards are eligible to seek autonomy.

The University of Mumbai has over 300 undergraduate colleges with an enrolment of over 3,00,000 students. These students learn more or less the same thing, half of it irrelevant or outdated, in the respective faculties. They learn the same way from teachers, many of whom consider teaching a secondary ritual. They answer the same questions, which are largely repeated from the papers set during the last two or three years. The answer papers are not properly 'assessed' as the teacher is called upon to assess a minimum of 50 papers, a day. More students are found passing the examination out of revaluation or verification than the first assessment. The commerce stream accounts for half of the student population — as many as 1,50,000. Out of about 50,000 students who appear for the final year commerce examination, about 25,000 pass out, giving around 50 per cent failure rate. Last year the failure rate was 52 per cent. If we exclude the top 20 or 25 colleges that report excellent result — over 80 per cent, for the remaining colleges the results of the final year commerce examination may not be more than 30 per cent. That is 70 per cent failure rate. The argument holds good for all other streams. General higher education in Maharashtra is tending towards an exercise in futility — teaching largely

irrelevant things, by and large, to uninterested students by de-motivated teachers in ill-equipped institutions, by using taxpayers money. This must change.

The university has become highly unwieldy. It can do nothing, even academic, without the prior sanction of the state government. No innovation is permitted, since it will cause at least indirect financial burden on the government. The government cannot be blamed, as its finances are in doldrums. It is facing huge deficits year after year. The accumulated debt of the state government runs into thousands of crores. Naturally it has to have some control over its finance. On the other hand, the expenditure is mounting year after year, due to a number of factors including price effect, revision of salaries etc, but definitely not due to an attempt to improve quality of higher education. And, higher education is not a priority item for the government. Since the state has accepted the responsibility of either partially or fully assisting the education of socially and economically deprived sections of the society, it is finding it difficult to allow universities to increase the fees, as this would cause an additional financial burden on the government.

We are therefore at a point called *thrishanku*. It is a state of neither here nor there. This is killing general higher education in the state. Particularly so when the contents and method of teaching, learning and evaluation of higher education are changing drastically abroad. The packages offered by foreign universities appear highly dynamic, relevant and contemporary. Hence thousands of students get enrolled in these universities irrespective of the fees. These universities offer a lot of other facilities, including opportunities to earn to pay the fees. Hence, our students are able and willing to pay hefty sums for the courses offered by foreign universities, as they see the courses useful in building their career. Even a BA course in Economics in a reputed American university may cost at least 8,000 to 10,000 dollars per annum (ruppes 3,50,000 to 4,50,000). Against this, our fee works out to less than 2,000 rupees per year, whether one's income is ruppes fifty lakhs, fifty

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thousand or five thousand per year. This is high time to re-examine the fee structure of general higher education, keeping in view the need for upgrading the quality, from time to time.

We should have universal school education. But do we need a universal higher education, is a vital question that needs to be pondered over. This question assumes importance in the context of paucity of funds on the one hand and the role of higher education, both overall personality and social development, on the other. Higher education is envisioned to ensure the basic inputs to individuals whose aptitude, ambition and environment are different from one another. We need to have institutions offering different skill-packages so that those who seek a particular package can get one to perfectly suit their needs. Today we offer the same package to all and sundry — whether they have aptitude or liking for it or not. This “one-size fit all” concept amounts to waste of time, energy and precious monetary and physical resources.

Take the case of a Vazeite, Yukta Mookhey, the Miss World 1999. She did an undergraduate course in zoology. When she was asked as to what she would like to do now, she said that she may go for some specialization in mass communication, particularly in the field of advertisement. What it has to do with basic degree of zoology is left to the academics and the university administrators to ponder over. She studied for a BSc degree in zoology in view of the prevailing circumstances, rather than an individual need. Since her goal was different, she was meticulously pursuing a well thought out programme of her own, outside the college system, at times disregarding the rules and regulations of the graduate course. Had the system of higher education allowed a certain degree of modular flexibility, perhaps Yukta could have gained a lot of skills within the college itself. Under an affiliating system, the college cannot provide these facilities, as it has no control over what it can offer. The university decides what the college should teach. The university's ability to offer flexible courses is inhibited by the direct as well as the financial control the government exerts on the university. In short, it is the bureaucracy of the government and the financial resources it can spare that decide the course of higher education. Unfortunately, the government is always in deficit and, therefore, higher education cannot expect any meaningful support from the state. Whatever the state gives will go for meeting the salary payment of the organized teaching and nonteaching staff, rather than improving the quality and contents of education. It is there-

fore, time for all of us to look at higher education differently. It is a social good only for those who need social support. The current thinking in certain quarters, which are highly influential, to provide free higher education to girls, irrespective of their economic status, is preposterous, to say the least. The state support should go to those who are in need, irrespective of the gender. If finance is coming in the way of qualitative upgradation of higher education, we may have to find a way.

Today, the government is coming in the way of higher education by its inaction. The fee prescribed for the higher secondary section (Junior college) has remained the same since 1976, despite the fact that the non-salary unit cost has gone up at least five times since then. Who meets the additional expenditure? It has given loopholes to those unscrupulous in the field to collect unaccounted money or deprived the students of basic facilities for want of finance. The government has to make up its mind and come out with a policy consistent with the times. We cannot allow higher education to fall to a state of irrelevance. If the government cannot help higher education with adequate funds, it should say so, and allow bonafide private initiatives with accountability. All private initiatives are not by rogues for personal aggrandizement. There are genuine, at times better, private efforts for broad social benefit. If all sectors of the economy and the government could be liberalized, there is no reason why higher education is left behind. Autonomy may have to be granted to eligible institutions and enlightened management, not with a cobweb of controls attached. Autonomy with social support is desirable, as it would enable the institutions to design courses and mode of its delivery system that will take care of the socially and economically disadvantaged sections of the students. If autonomy is granted without state support, it would be purely market determined, like the fees of the foreign universities. In a developing country like India with a highly skewed distribution of income and wealth, autonomy without public financial support may not work in general higher education.

The Autonomy Statutes & Teachers' Union

The Senate of the University of Mumbai has passed the statutes approved by the Management Council. Out of about 90 members, there are 20 teachers and 15 principals of colleges in the Senate. The Statutes were earlier unanimously approved, after a few modifications, by the Management Council of

the University. The Statutes will now go to the Chancellor for his assent and once the assent is received, the process of conferment of autonomous status will begin.

The teachers' union has taken objections to four aspects of the Statutes and has made a representation to the Chancellor. They are the following :

- (a) that autonomous colleges are allowed to fix fee structure,
- (b) that teachers on various bodies are not elected, but nominated,
- (c) that confidentiality of agenda deprive right to information, and
- (d) that autonomy should be granted only to those colleges with a standing of 20 years and not 10.

The opposition appears to be on flimsy ground. First, it is very clear that autonomy would radically change the course structure and contents. The teaching-learning-evaluation process may undergo modifications. No one would hike the fee to cover the additional cost, if there is adequate provision made in the Statutes to meet the cost of autonomy. The government has made it very categorical that it may not bear the additional cost incidental to the updating of the content of education in an autonomous college. It naturally would mean that mechanism would have to be devised to meet the extra cost, including payment of incentives to the staff for excellence. One way of meeting the cost is to charge additional fees from the beneficiaries — the students. Will the teachers find an alternative and sustainable way to meeting the additional expenditure? Alternatively, will they accept additional work to avoid additional appointment and salary expenditure? The union, which is opposing additional fee, should have presented a formula to positively ensure a viable or feasible mechanism to meet the cost of autonomy. It may be remembered that there are sufficient checks in an autonomous college to prevent misuse of funds.

The second issue is the election instead of nomination of teachers on various bodies of autonomous college. If an autonomous college is to function smoothly, we need teachers whose academic and administrative capabilities have been proved. They should have adequate experience in dealing with students, parents, members of the public as well as the university and government

authorities. The responsibilities of the principal of the autonomous college would be more than that of an affiliated college. The teacher-representatives are the main pillars of the principal to ensure the objectives of autonomy. It is therefore ideal to have experienced senior teachers with proven capabilities nominated on the bodies of the autonomous colleges. In affiliated colleges all curricular and extra-curricular activities are carried out at present by teams of teachers nominated by the Principal. No instance has been brought out to show that nominated teachers have undermined the interest of the teaching fraternity. The opposition to nomination is only for the sake of opposition.

The third issue relates to confidentiality of agenda. Statute 617 states that agenda and the minutes of the meeting of the Board of Management shall be confidential till the decision is taken and the minutes are confirmed. This is nothing new. They are so confidential even today in case of the agenda of Management Council of the University. Once the decision is confirmed, it is no more confidential. This is a healthy practice in any organization. No right of information is thwarted as alleged by the union.

Finally the opposition to conferring autonomy on colleges with a standing of 10 to 19 years, is not based on any valid reason. Standing of 10 years is based on the UGC guidelines, and applicable all over India. If a college with a standing of 6 years could be considered for permanent affiliation, why not consider all such colleges for autonomy? In fact there is a strong argument for starting new institutions as autonomous colleges from the very beginning. This will enable them to design the course contents and teaching-learning and evaluation process right from the start. Institutional planning and administration would become more effective in such cases. There is no transition cost as well. Institutional excellence is year-neutral. There are outstanding examples of mediocrity even after 50 years of standing, and of excellence with even less than 10 years of standing. What is important is the acceptance of the college by the society and the university. The UGC and the government should consider all colleges assessed and accredited by NAAC with Grade-A or A-5-Star as deemed to be autonomous. Such colleges could be invited to become autonomous colleges without going through the preliminary formalities of inspection committees and notification etc. Conferment of autonomous status on Accredited A-Grade colleges will save a lot of time and money if they

are allowed to form the stipulated bodies/committees to begin functioning as autonomous college from the forthcoming academic year.

It is unfortunate that the Union has taken objection though it says that they are not opposed to autonomy *per se*. The statutes were accepted by the Management Council and the Senate after considerable deliberations. The teachers' union has considerable representation in all these bodies. While the resolution adopting the statutes was unanimous in the Management Council, every amendment brought in by the teacher representatives in the Senate was deliberated and put to vote. Some of them were accepted while some others rejected through the democratic process of voting in the house.

Need for Supplementing Statutes

The institutional structure and relationship in Maharashtra are different from other states where autonomy has already been ushered in. Hence the UGC guidelines on autonomy need to be supplemented by incorporating Statutes that will take care of the unique situations in Maharashtra. That has not happened and therefore the Statutes so formulated appear to be inadequate to create and sustain autonomous colleges in Maharashtra. There are matters beyond the scope of the statutes, which need to be identified and streamlined by formulating policy and directions. The government and the university should address some of the following issues as they have not been dealt with in the Statutes. This is inevitable to facilitate smooth functioning of autonomy on colleges.

(a) *Admission* : At present every undergraduate college has an attached Higher Secondary Section, called Junior College. The students passing out of the attached junior college are given preference in admission to the first year degree class, disregarding merit. Only in case seats are vacant, students from other junior colleges are considered for admission on merit cum reservation basis. If autonomous college has to admit all students on open merit, the status of admission to the in-house students will have to be made clear to avoid the fall out of change from convention. Similarly, at present the practice is to admit as many as 120 students in a Division, despite the UGC norm of about 80. If the intensity of teaching learning in an autonomous college is of a higher order, it may not be physically and intellectually possible for a teacher to deal with such huge class. There are teachers who deal with as many as 500 to 600 students in a week in certain subjects. It is desirable to prescribe a functional teacher-student ratio for au-

tonomous colleges, keeping in view the norms laid down by the UGC.

(b) *New Personnel*: An autonomous college is akin to a university. With increase in curricular and extra-curricular workload, there would be need for personnel like teachers, tutors, demonstrators, Deans, Director of Physical Education, Students Welfare Officer, Computer Programmer to mention a few. Some of these positions are not in existence at present but are very significant in case the college have to ensure all round efficiency in performance.

(c) *Marginal Subjects*: Not all subjects and papers are considered equally important or popular with the students. There are certain marginal subjects in every college introduced out of compulsion. Some of these are compulsory for the students. Students' interest in some of these subjects is lukewarm. Some of them have been introduced just to protect the then existing staff. These subjects may get marginalised in view of a greater choice given to the students. Some mechanism may have to be devised to sort out problems relating to these subjects and teachers. Equally important is the issues relating to surplus teachers and autonomy.

(d) *Non-teaching Staff*: In an autonomous college, the nature and magnitude of work of non-teaching staff may change. Some of the functions hitherto carried out by the university will now be with the college. Additional staff may be needed. There will also be need for relocating staff depending on the requirements. The Standard Code and other direction should not come in the way of institutional planning and placing of the non-teaching personnel.

(e) *EBC, SS/ST Students*: At present, the fee of certain categories of students, such as Economically Backward Class, Scheduled Caste and Scheduled Tribe etc are borne by the government either fully or partially. When certain universities revised the fee, the government refused to share the additional fee of the EBC students. Further it directed that no additional fee be collected from such students. This meant that the burden of increased fees fell on the private college management than on the government or the students. Such a stand by the government will jeopardize the setting up and functioning of autonomous college. The government should clarify its stand on the issue right at the outset, so that the colleges will not be forced to abandon the process of autonomy midway.

(f) *Salary and Non-Salary Expenditure and Grant* : There will be lots of new heads of expenditure in an

autonomous college. For instance, some of the expenditure like application fee or expenditure incidental to the meeting of various bodies may not be admitted as admissible item for grant. Restructuring the syllabi and modifications in teaching-learning process will also attract additional expenditure. An unambiguous grant-in-aid formula may have to be designed specifically for autonomous colleges to avoid confusion and uncertainty.

(g) *Finance*: With the reduction in the students strength in the class and updating of the syllabi as well as interactive and transparent teaching-learning-evaluation, the cost of education is going to be more than what it is in an affiliated college. The government-university-management should consider this issue seriously rather than taking individualist stand. The government has taken a stand that it will not bear any expenditure even now. The management will be left with no option but to increase the fees to cover the cost, as we do not have any system of making the user-sector bear part of the cost. This will raise the fees substantially. Should only the students be made to bear the cost of autonomy? Should not alternatives be explored? There is a need for an initiative for equitable distribution of the additional cost.


(h) *Junior College*: The junior college is an integral part of the affiliated college, but does not come within the scope of autonomy. The city's most of the established colleges are very big institutions with nearly 5,000 students, equally divided between the Degree and Junior sections. A degree college with over 2000 students opting for autonomy would entail formidable administrative and academic work for the Principal. He may not have adequate time and energy to devote to the junior college administration. Issues relating to administration of junior college, therefore, would have to be sorted out so that the Principal could concentrate on the planning, execution and sustaining efficient functioning of the autonomous college.

The issues mentioned above may not come under the scope of the Statutes. What we need are positive will and clear administrative directions on the part of government, university, management, students and staff to ensure a smooth and efficient functioning of an autonomous college. The user-sector too could be made to participate in the functioning of the autonomous institutions. This will reduce the burden of unit cost on the students. If all aspects of the college are not adequately attended to, no autonomous college will come up, and the present efforts

will become another unproductive exercise, like that of the early 1990s.

The new millennium will offer to the youth of India new challenges and opportunities, hitherto not seen. We have to prepare for a huge generation gap between yesterday and tomorrow. The equations and values are altering in every field — be it agriculture, industry, trade, commerce, government or education. For instance, the pioneers in the industry — Tatas, Birlas etc with huge investment in a wide range of industries, are being relegated to lower positions by the new entrants — Wipro, Infosys, Satyam, NIIT, totally unknown a decade ago. The new yardstick is market capitalization and not investment or turnover. The higher education today is incomplete without knowledge of computer soft-skills. Economics, sociology, history, literature, biology, chemistry, civil or mechanical engineering — all converge ultimately into computer software. This is the emerging scenario. The students cannot be blamed if provision is not made in the college. Every student is found going outside the college system to learn what he wants to do. For him, the colleges is becoming less important. The IT revolution may render the role of the teacher superfluous if he is not updating himself with the latest in the field. The deficiencies of general higher education can be sorted out to a great extent if institution is given freedom to design its own courses, based on feedback from the community and the user sector. This will make education relevant. A lot of waste that exists may also be eliminated. This will improve the standing of the institution and the teacher in the society. This can happen only if institutions are granted full academic and at least partial financial autonomy. Let the new millennium unlock the mindset of the leaders in the government, university and the staff unions, who currently decide about the fate of higher education in Maharashtra. Let us work to usher in an era of excellence and efficiency through autonomy of the deserving and capable institutions. □

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Competitive Anxiety Among University Players

Santosh Arora*

The most harrowing experience of human life is anxiety. Anxiety is a common phenomenon of modern civilization and all of us are the victims of anxiety in one way or the other (Goodstein and Lanyen, E. 1975). The specific symptoms of anxiety vary from person to person. Anxiety is a complex emotional state characterised by a general fear and tension. Anxiety has been regarded as a basic causal factor in the development of neurosis and then behavioural disorders.

Several studies demonstrate anxiety as a causal variable affecting the performance of an individual. Anxiety plays an important role in sports. Anxiety affects sports performance of players. It plays both a positive and a negative role on the sports performance. In the field of sports certain competitive situations naturally produce more anxiety than others. Several investigators have attempted to study the anxiety level of different types of games. Tutko 1971, Singh, A. 1995, Karpman, 1981 noted that team game players had less competitive anxiety than the individual game players. A number of studies have indicated that female players were more anxious than males, (Kane, 1966; Malumphy, 1968; Kane, 1972, Ikponmwose, 1981; Heilburn, 1964; Gal, 1969; Singh, 1985).

Objectives of the Study

The present study was designed to measure competitive anxiety of university players of various games. The following objectives have been laid down in order to explore the competitive anxiety of students of MJP Rohilkhand University, Bareilly.

1. To study the competitive anxiety among university players;
2. To find out the gender discrimination in competitive anxiety of sports persons; and
3. To find out the differences between the players of the team games and individual games in relation to competitive anxiety.

Sample

The present study deals with the players of the MJP Rohilkhand University, Bareilly. 80 players of various games were selected. The selected players were studying in the affiliated colleges of Rohilkhand University. The study deals with the university level players. The game-wise break-up of the players is

given in Table-1.

Table-1 : Game-wise distribution of university players

S.No.	Sport	No.	Male	Female
1	Athletics	20	08	12
2	Hockey	15	07	08
3.	Swimming	12	08	04
4.	Table Tennis	10	04	06
5.	Volleyball	18	12	06
6	Chess	05	02	03
Total		80	41	39

Tools and Techniques

The following tools were used to collect the relevant data.

1. General Information questionnaire (1996) to collect detailed information of the players like Name, Age, Date of birth, Sex, Class, Section, Father's occupation, Income, Caste, Family Size, Residence (Urban/Rural) and Marks obtained in previous examination etc. This tool was used to build a rapport with players.

2. For the measurement of Competitive Anxiety of the players of the university, Sports Competition Anxiety Test (SCAT) was used. This test has been developed by Rainer Martens (1977). This tool is very comprehensive and attempts to probe the competitive anxiety through 15 items. SCAT was constructed to assess trait anxiety in the competition situation.

Procedure

In order to establish rapport and develop a conducive environment, General Information Questionnaire was administered. This Questionnaire helps in assessing the background of the sample. For the assessment of anxiety, the Sports Competition Anxiety Test (SCAT) prepared by Rainer Martens was administered. After collecting the test sheet they were scored with the help of test manual. The raw score of players on test of competitive anxiety was tabulated separately. The Means and SD of the anxiety scores of male and female players on the basis of their sports and t value were calculated in order to find out the significant differences between various groups of players.

Result and Discussion

The data collected has been analysed in Tables 2-4.

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Table 2 : Competitive Anxiety among University Players

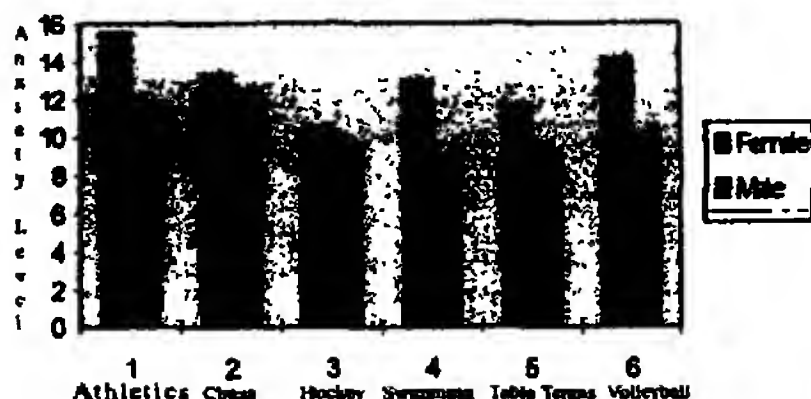
S. No.	Sports	Female			Male			't'
		N	M	SD	N	M	SD	
1.	Athletics	12	15.49	4.19	08	11.81	3.43	2.57**
2.	Chess	03	13.23	0.45	02	12.45	3.18	0.45
3.	Hockey	08	10.47	2.18	07	9.47	1.03	1.12
4.	Swimming	04	12.92	1.36	08	8.98	1.42	4.69**
5.	Table Tennis	06	11.56	2.7	04	8.92	0.92	2.31*
6.	Volleyball	06	14.15	2.08	12	10.12	2.28	3.82**
Total		39	13.13	2.06	41	11.79	2.46	2.12**

** P-0.01

* P-0.05

Table 2 reveals that a significant difference was found in competitive anxiety of university players of different sports. Female players were more anxious as compared to male players. While considering the gender discrimination on competitive anxiety for 6 games, significant differences were found between male and female players with regard to Athletics ($t=2.57$, $P<0.05$), Swimming ($t=4.69$, $P<0.01$) Table Tennis ($t=2.31$, $P<0.05$) and Volleyball ($t=3.82$, $P<0.01$). The analysis of data shows that female players have more competitive anxiety than their male counterparts. However, no significant differences were found in relation to Chess and Hockey ($t=0.45$, 1.12).

Competitive Anxiety Among University Players of Various Sports



The mean scores of competitive anxiety indicate that female players are more anxious towards their sports performance and success in competitions.

Table 3 : Gender discrimination between players of individual & team games

S. No.	Sports	Female			Male			't'
		N	M	SD	N	M	SD	
1.	Team Games	14	12.05	2.79	19	9.62	1.84	2.71**
2.	Individual Games	25	13.81	3.56	21	10.42	2.22	3.86**

** P-0.01 Level of Significance

It is evident from Table 3 that both groups vary in relation to competitive anxiety and 't' value of male and female players are found 2.71 and 3.86 respectively. These values are significant at 0.05 and 0.01 level. Mean score in case of male players are found distinctly superior in relation to competitive anxiety. It further confirms that female players of individual and team games

had more competitive anxiety than male players. Mean scores of both groups indicate that female players of individual games are significantly anxious than female players of team games.

Table 4 : Anxiety difference between Individual and Team game players

S. No.	Sports	N	M	SD	't'
1.	Individual Games	46	12.22	3.18	2.27*
2.	Team Games	33	2.89	1.97	

P-0.05

The calculated 't' value for the competitive anxiety among players of individual and team games is found significant at 0.05 level. Means scores of both groups indicate that players of individual games like Chess, Table Tennis, Swimming and Athletics have more competitive anxiety. Mean scores of players of team games show that players of this group are superior on competitive anxiety than players of individual games.

Conclusion

In the context of the results and interpretations the conclusions drawn may be summed up as follows :-

1. There are significant differences between male and female players of university on competitive anxiety. Female players are more anxious than the male players.
2. Female athletes have highest competitive anxiety. The female hockey players have lowest competitive anxiety, whereas male Table Tennis players have less competitive anxiety.
3. Players of team games have low level of sports competition anxiety. Players of individual games like Athletics, Chess, Swimming, Table Tennis have high competitive anxiety.

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Teacher Education Curriculum Responsive to Societal Needs

Suraksha Pal*
Poonam Sharma**

The present era is changing into new era very rapidly. Telecommunication, computer and other kinds of information technology have changed the whole world into a global village. Each and every event taking place in any part of any country reaches other parts of that country and to another country. Scientific and technological influences have brought about many significant changes in the society as well as in the world of education. Of course, in the world of today we must also think in terms of changes in values, perception, political interference in educational planning, changes in educational needs, cultural changes, changes in attitude and level of motivation and above all, teachers' role expectation by the society in view of all the above changes. All these societal needs require that more and more knowledge is imparted effectively to more and more people in less and less time. This sums up the educational demands of today. The sole responsibility lies on the shoulders of teachers. It is only teachers who can mould the character of society according to the societal needs of the day.

In view of the above, the teachers must have desired theoretical knowledge, skill orientation, linguistic ability, pedagogical skills, management skill, accountability, impressive personality etc. For this teachers have to be trained and their preparation depends on the teacher education curriculum. The effectiveness of this curriculum depends in a great measure, among other things, on the professional preparation of teachers. The effectiveness of the professional preparation of teachers, in turn, depends upon the teacher education curriculum and its transaction in a right way. It is through this curriculum that the requisite competencies are developed in prospective teachers. Now certain questions arise to be pondered over like 'What is the nature of present teacher education curriculum? What are the recent trends in the teacher education curriculum? Does

this curriculum claim coverage of the emerging needs of the society? It is responsive to the societal changes?' These are some of the pertinent questions in search of answers.

Nature of the Present Teacher Education Curriculum

The present teacher education curriculum reflects the traditional concept of instruction both in terms of its contextual organization and the instructional procedures used. It contains no adjustment for the changed concept of instruction resulting from new curriculum. Typically, in the set of courses that make up the teacher education curriculum, no attempt has been made to develop an internally consistent conceptual structure in the sense that basic concepts are introduced with an eye towards further elaboration in later courses.

The present teacher education curriculum fails to develop a sense of commitment and accountability in general. Commitment and accountability as professional values have a moral dimension which is implicit in all professions having social utility. In teacher education they acquire greater significance in view of the fact that education involves the international transaction of what is worthwhile and if a teacher does not have the professional will to do so, he can seriously harm the cause of education by remaining indifferent and apathetic. This is not difficult to do if it is realized that the purpose of teacher education is not to prepare teachers with trained minds but with educated minds. Social acceptance and identification with community go with accountability, and a teacher is bound to lose his credibility if he does not feel accountable to his pupils, to the school system and to the community at large.

Present teacher education curriculum is too much theoretical. In fact, it is this large component of theory papers that has hampered the growth of practical and pedagogical aspects of the programme. This has, in turn, checked the growth of teacher education as an exclusively professional course. The whole programme is a hotch-potch of

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theory and practice, unrelated and unintegrated. This curriculum is often criticized as too theoretical which seems to mean that it doesn't help the teacher understand or deal with the problems the encounters on his job. The subject matter courses commonly take up material of little evident use in school training.

The Emerging Trends

N.K. Jangira (1984) has discerned and discussed four dimensions of curriculum — structure related dimension, content related dimension, transaction related dimension, and curriculum development process related dimension.

The structure related dimension covers curriculum areas including both theory as well as practice. It has been felt since long that the teacher education as it obtains at present is heavily weighted in favour of theory. The result is low effectiveness of teacher education programme. The situation has been reversed in Teacher Education Curriculum Framework developed by NCTE. The curriculum has been conceived along three dimensions — Pedagogical theory, working with community, and content-cum-methodology. So, there is a definite trend towards providing higher weightage to practical aspects of teacher education. Secondly, the emergence of the new era of working with the community and socially useful productive work indicate curriculum framers' concern for linking teacher education to development and productivity.

Content related dimension comprises specific content in each of the curriculum areas and its placement. The facts, concepts, generalisations, skills, values and attitudes specifically covered in different areas constitute the core of the dimension. The content related dimension is marked with two notable trends. First, the content of education has shifted from merely historical and problem orientation alien to the emerging society. Secondly, in the context of psychology of teaching course of a country, the data and examples of the same country in which these will be applicable should be used.

Transaction related dimension of teacher education curriculum has received more attention in recent years than it had received hitherto. It covers the implementation aspect of curriculum. The teaching strategies employing media and material used for effective curriculum transaction form the

core of the dimension. The trend is welcome as it will improve the quality of instructional materials, and thus, the corresponding quality of curriculum transaction.

Curriculum development process related dimension refers to the decision making process, curriculum drafting, review, transaction, evaluation and renewal of the curriculum along with the infrastructural modalities for the same. The trend needs to be strengthened.

These trends are promising in the sense that they are likely to improve and strengthen the teacher education programme in a global perspective. In the light of the above, it is apparent that the present teacher education curriculum does not cover the emerging needs of the society. Also it is not responsive to the societal changes and needs.

Suggestions

The teacher is a reflective member of the society. Teacher preparation can at best mean equipping each prospective teacher with proper attitudes and a variety of skills and tools which he can manipulate for their effective use according to the demands of a particular society. In fact each teacher should be encouraged to develop his own approach and set of skills which suit him best and which he alone can utilize best. Thus, some major changes in the teacher education curriculum and certification requirements are needed.

1. A series of measures for improving the personal and professional growth of teachers are suggested to be included in teacher education curriculum :

- Personal enrichment,
- Career related advancement (Correspondence courses etc),
- General professional skills in wider setting, and
- Job related (teaching techniques and classroom control).

It shows how one can move up the professional growth ladder.

2. What counts as knowledge is vigorously contested, and so, it is important to explore the contrasting epistemologies of professional

knowledge i.e. positivistic, interpretive and critical — in the teacher education curriculum.

- Positivism is related to methodology of so called process-product-research.
 - In interpretive study, the knower and the known are closely interwound because one must use oneself or one's culture to understand other.
 - With critical orientation attention needs to be addressed not only to how knowledge is used by dominant interests but also to the validity of the underlying radical analysis of education & society.
3. Knowledge and practice should be related by rules, evidence and schemata.
 - When rules (principles) are used to bridge the gaps between educational research (knowledge) and practice, the results of research become imperatives for teachers to follow.
 - Bridging with evidence occurs when the results of research are used to test the belief that practitioners held about their work.
 - Schemata i.e. representation of educational phenomena can be used by teachers to see their work in new ways. For e.g. time related schemata, including the concepts of allocated time, engaged time and wait time can lead practitioners to rethink the organization of their teaching activities.
 4. Educating teachers is an inter-disciplinary enterprise because every discipline has something important to say about them. Thus, foundations of education in teacher education curriculum derives its character and fundamental theories from a number of academic disciplines, combination of disciplines and other studies — history, philosophy, sociology, anthropology, religion, political science, economics, psychology, comparative education, international education, educational studies and educational policy studies.
 5. In contrast, with an increasingly diverse student population, the teaching force is homogeneous and it is projected to become increas-

ingly more so into the next century. Hence, curriculum should be reformed to teach an increasingly diverse student population i.e. students of multi-cultured background, second language concern etc.

6. To educate teachers for special educational needs (Learning disabled, mentally retarded, emotionally disturbed, speech of language impaired, hard of hearing, multi-handicapped, orthopedically impaired, deaf, blind) concepts like legal and ethical principles, educational theories and systems, effective instruction, behavioural principles, classroom management, teaching basic literacy skills, teaching for self regulation, strategic behaviour, interactive teaching for cognitive change should be included in the curriculum.
7. It is strange that teacher training has all along tried to bind a trainee to a methodology, generally called training college method, and not allowed him freedom to manipulate tools and methods as he likes and evolve a teaching style of his own. To restrict it, teacher education will have to explore the possibilities of generating openness of mind and openness of outlook so far as teaching skills and methods are concerned.
8. In this effort, teacher education will have to open its doors wide. Through a meaningful and profitable interaction with other disciplines by drawing fully from scientific and technological know-how, by increasing in a large measure the professional component in the whole programme of teacher education, by preparing teachers for a more dynamic and constructive role in the emerging society and by making a serious job of teacher preparation through more prolonged and intensive efforts, teacher education can do immense good to itself and to education.
9. Teacher education programme and certification requirements need to reflect the importance of co-curricular programme and the reality of its being a part of the teacher's work. The co-curricular is also a key variable in the hiring decision. Teacher education programme would do well to recognize its presence and to help pre-service teachers in developing skills for this important part of their future work. □

Pathway to Empowerment

Dr. Lalitha Kameswaran, Member, Tamil Nadu State Planning Commission and Former Vice-Chancellor, T.N. Dr. M.G.R. Medical University, delivered the Convocation Address at the twelfth convocation of the Alagappa University, Karaikudi. She said, "It is not only a select few who seek admission to institutions, but the society has become aware, that in today's milieu, education is the stepping stone to power. Whether man or woman, education is the primary pathway to empowerment, through upward economic mobility to higher social status." Excerpts

We are on the threshold of a new millennium, and there is a lot of excitement about the impending dawn of the new millennium. But words like millennium, century and decade are like punctuation marks in the passage of time, and do not convey any more information to us. One century merges smoothly into the next, and one millennium slips quietly into the next. However, these words have some significance to us.

These are punctuation marks where we pause, to recollect the past and imagine about the future. It gives us an opportunity to assess the achievements and failures of the past, and think constructively about the challenges of the future.

In the last two thousand years, which is comparatively a small slice in the history of mankind, humanity has perceived vast changes in its lifestyle, in its concepts, in its environment and motivations. In the ancient past, physical prowess was power.

Today, intellectual growth is power. In almost all parts of the globe, in the ancient past, education was understood to mean spiritual education. These were carried on in monasteries,

ashrams and *gurukulas*. Occasionally, pupils got trained to acquire special skills as in martial arts, the skills of diagnosis and therapy for ailments and use of performing arts in small specialised schools. Otherwise, all arts and crafts were taught directly by apprenticeship from father to son or teacher to a restricted number of pupils who were privileged.

With the rapid strides made in science and technology in the later part of the last millennium, the entire picture has changed. It is not only a select few who seek admission to institutions, but the society has become aware, that in today's milieu, education is the stepping stone to power. Whether man or woman, education is the primary pathway to empowerment, through upward economic mobility to higher social status.

This modern approach to education, as a means of economic power, came to us first in a foreign language. Science and technology education first came to us in English. All families were naturally anxious that the bread winner should get an opportunity to acquire the knowledge and men had the

privilege of English Education before women. Three centuries of this pattern of education led to clear class distinctions in the society, with those who knew English considering themselves as belonging to a superior class. Even within the small circle of a family, the women who were left behind without English knowledge, were looked down upon as ignorant. Great scholars in local languages and literature were not respected and no wonder that women were treated as less human than men.

Along with the struggle for national independence a lot of voices were heard in favour of social reforms. This brought in an era of greater opportunities and equality in education for candidates of both sexes. On the whole, this has given us the good fortune to see several great women emerging as leader in society — starting from Smt. Vijayalaxmi Pandit to our present Chancellor. Today, we can happily say that every father wants to educate his daughter.

I am delighted to note that this university has a department of Women's Studies. Even within Tamil Nadu, some areas have lagged behind in this momentum to promote higher education of women. Alagappa University, Karaikudi is strategically situated to impart this impetus and to study different modules of education needed to rectify the cause for backwardness of women in some areas.

Whether it be women's education or men's education — the student community is poised to meet the challenges of a new world, where competition is

global. Our talents have to meet the demands of the expanding horizons of a global trade. Along with commodities, we are now faced with the need to export our talents also. This can be successful venture, only if our talents are superior to those of other in different parts of the world.

Constant and continued research, sustained efforts to update and upgrade the knowledge and skills of our candidates, have become the need of the hour. So universities also have to gear themselves to meet the demands of the youth, who are anxious to prepare themselves for the anticipated adventures of life. Universities cannot afford to remain static with a contented view that eminent men are to be top of the hierarchy. There is a rapid turn-over in knowledge and skills and a flux of young men and women running around from pillar to post to acquire the required knowledge and skills. So many private institutions are coming forward to impart training in newer skills. With the advent of computer knowledge and information technology, there is need for youngsters to get trained in different areas at reasonable cost.

Universities have to think of ways and means to meet the demands of these aspiring candidates. In addition to all the structured courses that we offer in our universities, we have to think of instituting part-time courses and evening courses to meet the demands of our educated work force. They have to be helped to compete with the best in the world. The earlier notion that by sending our educated youth abroad, we are

losing our country's talents in no more receiving the support or acquiescence of the society. When a newspaper reporter asked about brain-drain, it was Dr. Abid Hussain, Ambassador to United States, who said that any day brain drain is better than brain in the drain! So once again our universities should think of only imparting liberal education and structured courses in Science and Technology, but think of short-term courses and part-time courses to enhance the talents of our youth. They, in turn, have to observe the great races of the world which have

put up with severe deprivation and competition and have survived against all odds. Like a Jew who has his primary loyalty to his own country, Israel, irrespective of his official nationality, so also the Indian should foster his sense of patriotism and contribute to the growth of India into a mighty and glorious nation, irrespective of where he may be working. His knowledge, his talents and his resources should always be available to the nation of his birth, in her times of need, irrespective of what his acquired interest may be. □

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CAMPUS NEWS

Environmental Degradation and Restoration

Government Raza Post Graduate College, Rampur recently organized a three-day "National Conference on Environmental Degradation and Restoration in conjunction with the Silver Jubilee Celebrations of M.J.P. Rohilkhand University, Bareilly. Supported by the National Society For Pollution Free Environment, the conference was inaugurated by Professor Zahid Hussain Zaidi, Vice-Chancellor, M.J.P. Rohilkhand University. He said that green house effect, ozone hole and ultra violet radiations coupled with local problems of pollution were the most threatening problems in the new millennium. Scientific community can overcome these challenges with the help of common man by explaining the exact meaning and magnitude of the problem to him and his role in maintaining the ecological balance. The conference was attended by a galaxy of the doyens of the educational and scientific institutions, Indian industry & from the management institutions. Dr. R.K. Baslas, Principal, Govt. Raza Post Graduate College, Rampur stated that although pollution of environment involved changes in natural, rather than man made realms — the air, water and soil — clearly these changes were due to human action rather than some natural cataclysm. The search for causes becomes focused, then, on the question : what actions of human society have led to pollution? Elimination and check of the pollution are the only right approach to save ourselves from pollution. Use of biological

agents instead of hazardous chemicals, biotechnology and less energy intensive process instead of high energy intensive chemical process in agriculture, medicine, industries and other human activities will go a long way in reducing pollution. Dr. Baslas emphasized that the most important social aspect is to bring change in attitude. Environmental quality restoration is concerned particularly with man's attitude and efforts. Every person should think in the morning that how his/her activities are going to degrade the environment and what effort have to be made in restoring the environment. Similarly, again at night, he/she must think that how much has he/she succeeded in maintaining the environmental quality. This thinking process will bring a change in attitude which will be effective to a great extent in restoration of a sound environment in years to come.

Dr. Alok K. Srivastava, Organising Secretary, enumerated the broad aspects of the conference. He emphasized that development of science and technology in industrial and agricultural sectors and rise in world human populations paved the way for rapid environmental degradation. Ecological knowledge can be applied for human welfare by applying conservation & restoration strategies for different types of ecosystems to yield economically useful material over a long period at a fairly high rate.

The conference was held in six technical sessions viz. 1. Ho-

listic approach to the environment, 2. Landscape Ecology, 3. Aquatic Ecology, 4. Pollution Ecology, 5. Environment & Agriculture, and 6. Animal Ecology. Notable contributions were made by delegates from educational and scientific institutions. The papers from wide national geographic area ranging from Nagaland to Rajasthan and from Garhwal to Tamil Nadu were contributed in the conference.

Prioritising Education

The academic club of Kanoria PG Mohila College, Jaipur plans to organise a three-day seminar on "Prioritizing Education : Making Education A Priority and Redefining Education's Priorities" on 13th, 14th and 15th March, 2000.

Half a century of independence, and a dozen education commissions later, the education scenario remains essentially bleak. While on the one hand, India is poised to become the largest exporter of professionals; compulsory, free primary education even, has become an unrealisable dream as increasing cuts and shrinking budgetary allocations to education, signify government's abdication of social responsibility in this field. It continues to remain a political blind-spot, in spite of being a fundamental directive, as there are neither political stakes nor mileage to be had from education. As a consequence of this, education policy in India has veered around to viewing higher education as a non-merit good, to universalising primary education at the cost of higher, to pitting the one against the other.

The dilemma arising from the present dichotomous educational concerns will consolidate social inequality and instead of empowering the disadvantaged, result in persisting endemic illiteracy. Not only this but falling academic standards, politicization, crisis of values, high dropout rate at the school level, absence of life skills education, high suicide rate among high school level students, neglect of women's and vocational education are some of the many problems with which our education system is infested. A thoughtful and concerned intervention by educationists at this juncture can help reorient economic and educational priorities with the help of rising educational level amongst parents and growing education aspirants, towards which this seminar is intended to be a small step.

It is proposed to devote a day each for school level education, higher education and non-formal and continuing education, with a session each of a survey of the scenario and projections for the 21st century; and following two sessions of possible inputs suggested and innovations in the area.

The areas proposed to be covered in the seminar include :

1. Life skills education,
2. Child friendly education,
3. Interrogating the failure of vocationalization,
4. Education as an instrument of social change and social justice,
5. Innovations in liberal education,
6. Distance education and role of media in education,
7. Resource Management and financing,

8. Conventional structures and possible innovations,
9. Keeping Education relevant,
10. Alternatives/Possibilities in Women's Education,
11. Rearticulation of Aims and Objectives of Education,
12. Status of Study in Education in India, etc.

Further details may be had from Ms. Seeta Rao, Convenor, Academic Committee, Kanoria PG Mahila Mahavidyalaya Gandhi Circle, JLN Marg, Jaipur.

MAHE Special Convocation

"The country needs a second vision — one that will transform it into a developed nation with self-reliance, economic prosperity and food security," said Dr. APJ. Abdul Kalam, Principal Scientific Advisor to the Centre, while receiving the honorary doctorate, conferred on him by the Manipal Academy of Higher Education (MAHE). He said the first vision — independence — had been obtained and for achieving the second, it required transformation of thoughts into action.

Stating that the country did not lack in manpower, scientific tools and resources, he said on the agricultural front, it required doubling of productivity. An integrated approach in software and hardware could propel the nation forward, along with adequate attention to healthcare.

Referring to the Prime Minister's "dream of the country becoming a developed nation in the next two decades", he said as a Scientific Advisor, his work was to generate missions for ushering in self-reliance and sufficiency.

Mr. C. Subramaniam, former Governor of Maharashtra, on whom MAHE (Deemed University), also conferred a honorary doctorate, said the scientific community should be liberated from the shackles imposed upon them by politicians and the bureaucracy. Poverty, illiteracy, disease and drinking water shortage were some of the challenges that lay ahead in the new millennium.

Another area of concern was how high achievers from centres of excellence, such as the Manipal University, could be utilised within the country and deterred from leaving its shores. It was for the scientific community to provide the tools to improve the quality of soil content, irrigation system, besides creating new seeds and devise the means to put fertilizers to prudent use, to ensure food security for a growing population.

Eminent jurist, Mr. N.A. Palkhivala, was also conferred a honorary doctorate by the MAHE university.

Dr. L.M. Singhvi, MP, Prof. V. Lakshmikantham of the Florida Institute of Technology, USA, and Mr. M.V. Kamath, University Board Member, felicitated the awardees on the occasion.

The university Vice-Chancellor, Dr. B.M. Hedge, said the university was honoured by presenting the degrees to the awardees. The citations detailed the achievements of the three eminent personalities and their contributions to development of the nation.

The university Chancellor, Dr. Ramdas M. Pai, who presented the degrees to them, recalled the efforts of Shri T.M.A. Pai, the founder of the Manipal

institutions, and said the awardees were 'modern role models' for students to look upto.

Vacation Students' Programme 2000

Inter-University Centre for Astronomy and Astrophysics (IUCAA) invites applications for the tenth Vacation Students' Programme (VSP). Students selected under the VSP will spend seven weeks at IUCAA to work on specific research projects under the supervision of the IUCAA faculty. The programme will conclude with seminar presentations of the projects by the participants, a written test and interview. Those who perform well will be preselected to join IUCAA as research scholar to do Ph D after the completion of their degree.

Students who will enter the final year of the M.Sc. (physics/applied mathematics/astronomy/electronics)/B.Tech./B.E courses in the academic year 2000-2001 are eligible to apply. Applications, in plain paper, giving the academic record of the applicant as well as two letters of recommendations from teachers, mailed directly, should reach The Coordinator, Core Programmes, IUCAA, Post Bag 4, Ganeshkhind, Pune 411 007, by March 15, 2000. The selected candidates will be informed by April 15, 2000 for the programme to be held during May 22 — July 7, 2000.

Use of "Indian Institute" Reserved

Some educational Institutions established by the private bodies are using the words "Indian Institute" with their names so as to give an impression of

statutory institution like Indian Institute of Technology, Indian Institute of Science, Indian Institute of Information Technology etc which are established by the Government of India and enjoy high reputation and credibility in the field of higher technical and management education. Prefixing the nomenclature "Indian Institute" by private educational bodies creates confusion as well as misleads the aspiring students

The Ministry of Human Resource Development, Department of Education, Government of India has decided that prefixing the words "Indian Institute" is to be exclusively reserved for institutes established by the Central Government. Any Institute established by a private body should not be given official recognition or permission to prefix words "Indian Institute".

Current Concepts in Bioinformatics

A three-day National Seminar on "Current Concepts in Bioinformatics" sponsored by the Department of Biotechnology (DBT), Govt. of India was recently organised by the Bioinformatics Centre of Pondicherry University. Sixty participants attended the seminar. Inaugurating the Seminar Dr. V.T. Patil, Vice-Chancellor of the University stressed the need of computer based information retrieval in the development of life sciences. He elucidated the application of the various aspects of bioinformatics in drug design and modern medical research. He stressed that the benefits of these researchers should percolate to the common man.

Earlier Prof. P.P. Mathur, Officer-in-charge, Bioinformatics

Centre welcomed the participants and elaborated the scope of the Seminar. Dr. A.R. Reddy of the School of Life Sciences proposed a vote of thanks. Dr. Madhan Mohan, Department of Biotechnology, Prof. Ramakumar of the Indian Institute of Science, Bangalore, Dr. N. Gautham, University of Madras, Dr. P. Gautham from Anna University, Mr. Arif Mohammad, Centre for Cellular and Molecular Biology, Hyderabad and Mr. Inderjeet Singh of Jawaharlal Nehru University, New Delhi, addressed the seminar.

Various topics covered during the Seminar included current developments on BTISnet, role of computations in drug design, discovery and development, practical aspects of sequence analysis, databanks and associated tools network architecture, data access and security in Bioinformatics, Bioinformatics resources on the web, sequence analysis, the use of protein and nucleic acid sequence databases in molecular biology, virtual classroom teaching using network tools. The participants got "hands-on" experience of various techniques.

Conference on Human Rights

As part of its Silver Jubilee celebrations, the S.P. College of Law, Chandrapur (MS) is organising the first annual conference of the Indian Society of Human Rights. His Excellency Shri K.R. Narayanan, President of India has kindly consented to inaugurate. The exact dates of the conference are being worked out in consultation with the President's Office.

The focal theme of the conference is "Human Rights : Is-

sues, Perspectives and Challenges in the new millennium". There will be 5 scientific sessions namely i) Human rights of the street Children; ii) Human rights of the girl child; iii) Human rights of the women in unorganised sector; iv) Human rights of the Adivasis; and v) Sustainable development and human rights.

To make the deliberations more productive and meaningful, it has been decided to limit the discussions in every session to the following : (i) Etymology of the problem; (ii) Prevalent legal provisions; (iii) Problems in implementation of the laws; (iv) Social work intervention and the role of the NGO's; (v) The psycho-social effects of non implementation; and (vi) Suggestions, Recommendations & Draft Resolutions.

Intending participants must send their paper and abstracts positively before 30th April, 2000.

To encourage a high quality presentation, it has been decided to award the best paper and presentation in each session. The best paper amongst these five would be awarded a gold medal. In addition, to encourage students participation, a special award would be given to the best paper and presentation in the students category.

Further details may be obtained from Prof. Sudha Peri, Organising Secretary, S.P. College of Law, Chandrapur-442 402.

Workshop on Interview Techniques

A one-day workshop on "Interview techniques and develop-

ment of presentation skills" was organised by the Department of Commerce under its M.B.A. programme at the D.D.U. Gorakhpur University, Gorakhpur recently. It was conducted by Mr. Ashish Srivastava, Regional Manager of M.K. Electric Co. Limited. The students were given tips regarding presentations of resume, grooming, written examinations, group discussion and presentation before the interview board.

Participants were exposed to various exercises such as word exercise, creative exercise, listening and reading exercise.

The workshop was organised under the guidance of Prof. R.S. Singh, Coordinator of M.B.A. Programme.

Inlaks Fine Arts Award

Inlaks Foundation has been awarding scholarships for study abroad in various fields since 1977 and in Fine Arts since 1981. Now the Foundation feels the need to encourage young artists to find their feet after college, and has decided to provide scholarships to enable them to work on their own anywhere in India. The scholarships are intended to help artists in their formative years to develop their individual creative talent.

Anyone with a graduate Degree/Diploma from any recognised Art Institution in any field of Fine Arts (including photography) and not older than 35 years is eligible to apply.

The scholarship shall comprise an award of Rs. 3000/- per month for a year, extendable to another year, provided the recipient shows enough initiative.

Apply with 12 colour transparencies, a passport size photo-

graph and a written proposal briefing how the candidate intends to use the award (enclose bio-data).

Number of Scholarships 2 or 3 per year. The application should reach on or before 10 April, 2000. (State Inlaks Fine-Arts Award on the envelope) Inlaks Foundation P.O. Box No. 2108, Delhi - 110007 Tele/Fax : 725-7965.

IT and Management Education

The B.B.A. Programme, of C.P. Patel and F.H. Shah Commerce College, (Anand) (Sardar Patel University) recently organised a two-day U.G.C. Sponsored state level Seminar on "The Role of Information Technology in Management Education".

Dr. Manjula Patel, the Coordinator B.B.A. Programme, in her welcome address stressed the importance of using information technology and mastering communication skills for effective teaching/learning in the field of management education. Shri Jaykrishnabhai Thakkar, the Managing Trustee of Sardar Patel Education Trust presided over the Inaugural function. Dr. S.M. Patel, Head of the Computer Centre, Sardar Patel University inaugurated the seminar. In his keynote address Mr. Sudhir Godhke stressed the need to take advantage of the information revolution — the need to get logged on to the Internet.

There were four technical session. In the first session on "The use of Internet, E-mail in various areas of Management Education," Ms. Neeta Shah, Dy. General Manager, Gujarat Informatics Ltd., Gandhinagar, clarified the concepts of Internet,

E-mail, E-commerce with the help of live demonstrations. She also detailed the programmes and schemes of the state government for creating awareness about the information technology for all round economic growth.

Dr. J.H. Khan, Reader, Dept. of English, Sardar Patel University and Dr. (Miss) Ranganaike Srinivas spoke on "The Importance of Developing Communication Skills in English through Education Media for Effective Managerial Performance," in the second session.

The theme of the third session was "Evaluation of Teaching Methodology in Social Sciences." and Dr. Amrapali Merchant, Prof. and Head Dept. of Sociology, Sardar Patel University, was the chief speaker.

The fourth and the final session on "The Suggestion for Effective Teaching of The Management Subjects" had Prof. M. J. Arul, Head, Centre for Management Studies, D.D.I.T., Nadiad as the lead speaker.

Technologies for Information Handling

A five-day National Training Course on Modern Technologies for Information Handling was recently organised by the All India Institute of Medical Sciences, New Delhi in association with the Medical Library Association of India. Prof. P.K. Dave, the Director of the Institute inaugurated the training programme. Shri Harjit Singh, Senior Advisor, Ministry of Environment and Forests, Govt. of India, delivered the keynote address. Prof. M.C. Maheshwari, the Dean of the AIIMS delivered the presidential address. Prof. M.G. Multhukumarasamy, former Vice Chancellor of Annamalai

University, Annamalai was the guest of honour. Dr. R.P. Kumar, the Chief Librarian of the Institute acted as the Coordinator of the training course.

The main focus of the training was on the practical aspects of automation of libraries, On-line searching, CD-ROM and CD-Networking, Multimedia, Digital Libraries, Electronic publishing and Internet etc. The trainees could learn various information technologies through hands on training on their application for quick and efficient information and library services.

The training programme

was attended by sixty participants comprising Librarians, Information Science Specialists, Documentalists R&D Scientists, Teachers in Library Science and Health Scientists. The trainees were drawn from across the country from Andhra Pradesh, Assam, Bihar, Chandigarh, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Manipur, Nagaland, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttar Pradesh, West Bengal and Delhi. Prof. S.S. Agarwal, Principal, College of Pharmacy, University of Delhi distributed the certificates to the trainees and delivered the valedictory address.

News from Agricultural Universities

National Centre for Women in Agriculture

The Indian Council of Agricultural Research (ICAR) has created National Centre for Women in Agriculture to disseminate newer technical know-how to women in agriculture as also to promote their all-round welfare. Disclosing this, Dr. R.S. Paroda, Director-General, ICAR said that this centre would implement a number of projects in agricultural universities all over the country to impart technological knowledge to women in agriculture besides reducing their household drudgeries. Dr. Paroda was addressing a workshop at the College of Home Science, CCS Haryana Agricultural University (CCSHAU) Hisar, after inaugurating the newly constructed women's hostel at the campus. The hostel building erected at a cost of rupees one crore has the intake capacity of about 90 inmates.

The ICAR Chief said that in view of the contributions of women in agriculture and live-

stock farming, a need was felt to provide all our support to them by eliminating the constraints being faced by them in social set up. He also stressed the need to revise and update the course curriculum of home science to meet the emerging challenges.

Dr. Paroda further revealed that to make State Agricultural Universities a seat of learning for international students, the ICAR has introduced a number of incentives including talent search programme, spouse employment programme, best women scientist award, best teacher award, best institution award, etc.

Speaking on the occasion, Mr. Vinay Kumar, Vice-Chancellor, revealed that the ICAR has sanctioned to the CCSHAU a grant of Rs. 1169.78 lakh for the year 1999-2000 for various schemes and projects. Besides, Rs. 116 lakh had also been released for renovation

of laboratories and hostels during the current financial year. However, he lamented the considerable decline over the years in the ICAR's share in the total budget of the university. He said, in mid 70's the total share of ICAR which was around 18 per cent of the total budget had declined to 7.53 per cent in 1999-2000. He also demanded catch up grant for renovation of old college buildings and hostels.

The Vice-Chancellor also apprised the ICAR chief about decline in admissions to B.Sc. (Hons) Home Science programme despite excellent infrastructure and capable faculty available in the College of Home Science. Seeking his intervention the Vice chancellor said, presently, students were being admitted to this course after 10+2 through an entrance test. More so, only students from science stream were eligible. This, he said, kept students of rural areas away from this college. He further pleaded for including this university in the second phase of Agriculture Human Resource Development Project saying the Project had benefited in terms of capacity building and human resource development at the CCSHAU.

Dr. Indu Grover, Dean, College of Home Science revealed that the professional electives, namely Pre-school management, mass communication and journalism, bakery and confectionary, interior decoration and fashion designing started at the College would ensure employment to Home Science graduates.

National Resource Data Bank

A National Resource Data Bank will be created in the College of Agricultural Engineering and Technology, CCS Haryana Agricultural University, Hisar, dis-

closed Dr. R.K. Malik, Dean of the College. He said the data bank will facilitate systematic analysis for drawing projections for future plans in agricultural engineering. Dr. Malik was speaking at the seminar being organised to commemorate three decades of establishment of the University. Highlighting the achievements, he said, the college played an increasing role in solving engineering related problems of the farm sector in the state. He called upon the college faculty not to compromise with the quality of education and integrate information technologies with the academic programme, to meet the merging challenges.

Prof. Ranvir Kumar, Head Department of Soil and Water Engineering expressed an urgent

need to mitigate the twin problems of water logging and soil salinization that the state was reeling under.

Highlighting future plans, Prof. S. Aggarwal, Head, Department of Farm Power and Machinery said that development of energy saving farm machinery would receive top priority. Prof. Surjit Jain, Head, Agricultural Processing and Energy pointed out that innovations in agro-processing would fetch the farmers remunerative returns, while Er. Amarjit Kalra, Incharge Basic Engineering revealed that besides establishing an audio-visual laboratory, the computer facilities would be strengthened to improve the teaching methods in the college.

News from UGC

Countrywide Classroom Programme

Between 8th March to 14th March, 2000 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programmes are telecast on the Doordarshan's National Network from 9.30 to 10.00 a.m. every day except on Saturdays & Sundays. These programmes are also telecast on Doordarshan's National Network from 6.00 to 6.30 a.m. on all days of the week.

8.3.2000

"Know Your Vegetables-I
Coriander Leaves"
"अनीता की कहानी-I"
"Why Conserve Wild
Animals"

"Mystery Within : Gulf of Kutch"

9.3.2000

"Amrita"
"Noise Pollution"
"Entrepreneurship-II :
Reaching Out"
"Let's Wait for the End"

10.3.2000

"Electroconvulsive Therapy"
"बंजारा जीवन"
"The Hyderabad Residency
Architecture"
"Effects of Globalisation"

11.3.2000

"सहरिया स्वांग"
"Beauty in Wood"

12.3.2000

"Fusion Music-II"
"जनूर आर्ट"

13.3.2000

"Multimedia-I"
"Touch of Genius"
"The Future of our Past"
"Genetics in Forest-II"
"Scientific and Technical
Mission of Transantarctica"

14.3.2000

"Question Time-137"
"The Communication
Revolution-I"
"The Repository of Indian
Heritage : Maheshwar"
"Fuse and its Use"

News from Abroad

M.A. in European Studies

One of the remarkable features of post-war co-operation in Europe is that it has been built on the complex diversity which is so typical of Europe : a diversity of cultures, languages, and ideologies. This is what makes European integration particularly challenging.

Katholieke Universities, Leuven (Belgium) that founded the MA programme in European Studies in 1988, fully realised that one cannot study European affairs to its full extent without also taking this diversity into account. Therefore they have opted to offer a broad set of courses, not limiting its scope to the European Union, but allowing students to study at the same time the larger European context, with both its similarities and differences.

Although the courses originate from different fields (law, economics, history, political science, arts, ethnicity studies,...) , each of them is taught at a high level by eminent specialists. Drawing on the experience of one decade, the European Studies programme has continuously improved.

In offering a Master's programme in European studies, the K.U.Leuven benefits not only from the solid reputation of its scientific research, but also from the location close to the unofficial capital of Europe : Brussels. This proximity

adds an extra value to the European Studies programme as it offers the opportunity to invite specialists from and to organize study-trips to various international institutions.

The MA-programme in European Studies is an advanced, full-time one-year study programme oriented towards an international audience of students. Applicants can request, for professional or other reasons, to spread the programme over two years.

To obtain the degree of Master of Arts in European Studies the student has to earn 60 credits. For that purpose students have to select eight courses out of approximately 20 courses on offer. Each course counts for 6 credits. To obtain the remaining 12 credits, students have to write and defend a major research paper.

Study visits are organized to the European commission and NATO Headquarters in Brussels, the Court of Justice in Luxembourg and the European Parliament and the Council of Europe in Strasbourg.

The Master's programme is open to holders of a Bachelor's degree or its equivalent in the field of humanities, liberal arts or social sciences. All applicants must prove that they have a sufficient command of English (TOEFL score

of at least 220/300 or IELTS score of 6.5 or more).

Courses on offer include :

- History of European Integration
- Political Problems of European Integration
- The Economics of European Integration
- Constitutional Law of the European Union
- Pressure Groups in the European Union
- European Security and Conflict Management
- The Economics of Transition in Central and Eastern Europe
- Political and Legal Changes in Central and Eastern Europe
- History of the European Economy
- Church and State in Europe
- Human Rights
- Ethnic Relations : Majorities and Immigrant Minorities in Western Europe
- Political Problem-solving in Culturally Divided Societies
- Linguistic Aspects of Ethno-Cultural Diversity
- Architectural Forms and Ideologies in Nineteenth Century Europe
- European Cultural History
- Nationalism in European History
- Main Political Currents in Modern Europe
- Introduction to Western Thought.

Further details can be had from K.U. Leuven European Studies, Blijde Inkomststraat 5 B-3000 Leuven, BELGIUM

UNESCO Medal for Dr. Bordia

Distinguished Indian educationist, former Education Secretary and former head of Lok Jumbish, Mr. Anil Bordia was awarded the UNESCO Avicenna gold medal and scroll for his outstanding contribution to basic education.

The award was given away by Prof. Moegiadi, Director of UNESCO, New Delhi, on behalf of the Organisation's Director-General. This is the first time that the Avicenna medal, named after Avicenna, the Persian scholar and philosopher-scientist, has been awarded to an Indian.

Recalling the extensive work done by Mr. Bordia at all levels of education – international, national and grassroot – Prof. Moegiadi said that it was not every day that one came across someone with that range and

depth of experience, "who plans, mobilizes, works with theorists and learners, and is home in both provinces."

Education for All

Political will and funding for basic education in the Asia-Pacific region should be the bedrock of an educational strategy for the 21st century, according to a draft Framework for Action adopted at an international education conference recently held at Bangkok.

"The lack of resource is often a matter of political will, both within national governments and among international funding agencies," according to the document approved at the end of the four-day forum.

In his closing remarks, UNESCO Director-General Dr. Koichiro Matsuura, said he was determined to make basic

education "an absolute priority" during his term.

He urged Asia-Pacific nations to learn from the review of educational progress that preceded the conference, attended by more than 40 government ministers, and "show the political commitment to follow up."

The conference was jointly organized by the five convenors of the International Consultative Forum on Education for All: UN Educational, Scientific and Cultural Organization (UNESCO), UN Development Program (UNDP), UN Children's Fund (UNICEF), UN Population Fund (UNFPA) and the World Bank. Other organisers included the Asian Development Bank and the UN Economic and Social Commission for Asia and the Pacific. It was one of six regional conference taking place around the world in the run-up to the World Education Forum.

Calendar of Events

Proposed Dates of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary / Officer to be contacted
March 24-25 2000	National Seminar on Teacher Accountability and Teacher Organisation	Teacher Accountability and Teacher Organisation	Chhotu Ram College of Education, Rohtak	Dr SS Dahya Seminar Secretary CR College of Education Rohtak - 124 001 E mail dahya@vsnl.com
April 3-7 2000	Management Teaching Techniques for Teacher (for OB HRM and Management Teachers)	Improving Pedagogical Skills	NITIE, Mumbai	Asst Registrar (Prog) NITIE Vihar Lake Mumbai-400 087
April 23-27 2001	41st International WEF Conference	Theme Education Linking the Planet	Department of Biological Sciences, Vista University Pretoria	Dr. Josef de Bear / Mrs. Elana Whatlock Department of Biological Sciences, Vista University Distance Education Campus, Private Bag X 641 Pretoria 0001 South Africa
May 28-30 2000	Association for Educational Research Annual Conference	Theme Research Issues in Curriculum	PVDT College of Education for Women, (SNDT Women's University, Mumbai)	Dr AG Bhalwankar Principal, PVDT College of Education for Women, Church Gate Mumbai-400 020.

BOOK REVIEW

A Highly Readable Book

Prof. M.L. Bhatia*

Donald R. Cooper and Pamela S. Schindler. Business Research Methods, Sixth Edition. New Delhi. Tata McGraw-Hill Publishing Company Ltd. 1999. Pp. VIII+703. Price Rs. 210/-.

Research in business has grown exponentially in the last three decades or so. Not only business students and academics but practitioners are now deeply involved in conducting studies which range over wide variety of topics and issues. A growing need has also been felt to evaluate research done by others. Though some progressive firms have their own research departments, they, in addition, often require special reports on many facets of their internal operations or external environments, be it consumers, industry, regulatory bodies or other elements of external environment. Most professional associations sponsor and conduct research for or on behalf of their members and for their own needs. There is a growing number of seminars and conferences at which, traditionally, research papers, are presented and discussed.

Targeted at students, researchers, academics and practitioners who conduct or evaluate research or have an abiding interest in scientific study of business issues, problems or decisions, the book "Business Research Methods" is divided into four parts and has 19 chapters in all. Some distinctive fea-

tures of different parts include : Research Proposal and Ethics in Business Research in part I; Scaling design in part II, communicating with the respondents in survey methods; and instruments for respondent communication in part III; and data mining in part IV.

Cutting through the bewildering maze of terms, definitions and philosophical arguments which usually characterize the literature, the book attempts to communicate research steps with clarity, offers guidelines which will help the researchers in defining problems, selecting methodology and evaluating results. The book is one of the leading, well known, and popular books available on the subject. It has been on the scene for over 20 years now. The very fact that the book has gone into the 6th edition, since it was launched in 1976, shows its popularity with the readers/users. The authors, (earlier author being joined this time by another one — Pamela Schindler), have taken pains to revise the material for the new edition and bring it up-to-date with the present state of the art.

Each chapter begins with what the authors call Bringing Research to Life (BRL) vignettes. The vignettes set the right tone and serve as a useful prelude for the chapters. There could not have been better way of opening the chapter innings. The presentation of the textual

material is in 'conversational' style. Another value-added feature of the book is 3 to 5 mini cases (in boxes) that deal with different managerial scenarios. What is particularly significant is the integration/interweaving of these mini cases into the text material. Most of the section headings/captions are in question mode and hence can easily register in the minds of the readers at the very outset. Each chapter ends with a summary, listing of key terms, an array of discussion questions and suggested readings. The index at the end of the book is quite expansive.

The treatment of the concepts is in sufficient depth. All the possible nitty-gritty aspects of research have been covered. Six appendices, dealing with additional useful information for the researcher, are also provided at the close of the book. A highly readable book, the 6th edition has a strong Praxeology /decision making bias. Some additional and more comprehensive cases (19) have been provided at the end of some of the chapters. The book has a research process orientation. The cases and vignettes amply reflect the integrated nature of research methodology, a fact whose appreciation is vital for successful execution of research projects. Researchers need to be able to think and act strategically in ways that combine intellectual, philosophical, technical and practical concerns rather than compartmentalizing these into separate boxes.

Some novel features of the new edition are : Exploratory study applications, graphical examples, a chapter on secondary data sources, reorganisation of instruments for Respondent Communication, some useful hints on data warehousing

*Professor of Management, School of Management Studies, Indira Gandhi National Open University (IGNOU), New Delhi.

and data mining, and new graphical techniques for quality control and improvements.

Over the recent past (during the late 80s and 90s) the qualitative or ethnographic research techniques have come to occupy an important part of research in social sciences and allied disciplines. Qualitative research is based on methods of data generation which are flexible and sensitive to social context rather than on methods which are rigid, standardised, structured or removed from real life. There is more emphasis on 'holistic' form of analysis and explanation than on charting surface patterns, trends and correlations. The coverage on Qualitative Techniques in chapter 6 (under design strategies) can only be described as cursory and, hence, needs to be suitably enhanced into a full chapter. Like social sciences, some courses in management, viz., Organisation Behaviour, Industrial and Organisational Psychology, Consumer

Behaviour etc — where causal/motivational research dominants — are more amenable to qualitative (non-structured/semi-structured) techniques than to purely quantitative, structured techniques or methods. Qualitative research does not necessarily preclude quantitative research. Both can play complimentary roles. Pragmatic considerations in several situations prompt a combined approach. The authors could very well blend the two approaches in this chapter, as they have done in the other chapters of the book so deftly by presenting an integrated view of research.

In order, perhaps, to keep the cost at a low level, the book has been printed in black and white on cheaper variety of paper from the original coloured film. Hence, the printing is somewhat subdued. A very small number of printing errors has been observed (e.g page 21) which may be taken care of in the next reprint.

Management programmes at the postgraduate level (whether MBA or M.Phil) which have project work component, invariably include a course on Research Methodology. Such a course often precedes the project course. Ph.D. programmes, in general, in whatever discipline, prescribe (as a prerequisite) that the candidates have exposure to a course on Research Methodology or that they have sufficient understanding and knowledge of methods of doing research. Comprehensive in its coverage, the book, while, it can serve as a primer on methodology for novitiate researchers, it will equally be found highly useful by students in the management, commerce, public administration and allied disciplines, including the doctoral programmes as a course book and by practitioners/managers as a post-course book. □

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3. B.E. (IE & M)	: 30	7. B.E. (IS & T)	: 30
4. B.E. (Elns. & Commn)	: 90	8. MCA	: 30
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THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities (December 1999 to January 2000)

SOCIAL SCIENCES

Anthropology

1. Bhat, Shripada Thammayya. *Uttara Kannada jilleya Saayajanapada*. (Dr Ambalike Hiriyanna), Department of Folklore, University of Mysore, Mysore.

2. Naik, Indira. *A comparative study on nutrition and its effects on tribal health : Analysis of data from three Oraon villages in Sundargarh District, Orissa*. (Dr S N Rath), Department of Anthropology, Sambalpur University, Jyoti Vihar, Burla.

3. Ozah, Anjan Kumar. *A study of the folk culture of the district of Sonitpur : Tradition and change*. (Prof N C Sarma), Department of Folklore, Gauhati University, Guwahati.

4. Talukdar, Sharmila Das. *The Khasi cultural resistance to colonialism*. (Prof A K Ghosh and Prof Sujata Miri), Department of Anthropology, North Eastern Hill University, Shillong

Commerce

1. Birendra Prasad. *Institutional financing and economic development : A case study of Chhotanagpur*. (Dr S B Say), Department of Commerce, Vinoba Bhave University, Hazaribag

2. Harilal, K N. *Trade barriers, structural mobility and unequal exchange : A study of India-IEC trade*. (Dr K K Subrahmanian and Dr T M Thomas Isaac), Centre for Development Studies, Jawaharlal Nehru University, New Delhi

3. Misra, Chuden Tshering. *Impact of tourism on sustainable development : Asian perspective*. (Prof R C Sharma), Centre for International Politics, Organization and Disarmament, Jawaharlal Nehru University, New Delhi.

4. Mohammad Monir Alam. *Central Asian Republics, quest for security in the post-Soviet period : A case study of changing pattern of relationship with Russia*. (Prof Devendra Kaushik), Centre for Russian, Central Asian and East European Studies, Jawaharlal Nehru University, New Delhi.

5. Mondal, Prabodh Chandra. *Impact of economic planning on the economy of selected regions : A case study of Nirma, Tundi and Baliapur block in Dhanbad District*. (Dr B Kumar), Department of Commerce, Vinoba Bhave University, Hazaribag

6. Rajeswari, P R. *US policy on technology export control towards India, 1980-1997*. (Prof R P Kaushik), Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi

7. Sahu, Surendra. *Consumer attitudes, product attributes and brand choice with particular reference to refrigerators in Bihar*. (Dr J K Prasad), Department of Commerce, Vinoba Bhave University, Hazaribag

8. Soni, Ashok Kumar. *Madhya Pradesh mein beedi udyog kee vitt vyavastha, utpadan evam vipanan* : Bhopal

evam Jabalpur sambhagon ka tulanatmak adhyayan. (Dr Santosh Kumar Gupta), Department of Commerce, Barkatullah Vishwavidyalaya, Bhopal.

Economics

1. Asan Singh. *Adoption of rice production technology in selected blocks of Chandan Command Area of Bihar : A comparative study*. Department of Extension Education, Rajendra Agricultural University, Samastipur.

2. Das, Kalyan. *Flexible specialisation in industrialization in the context of urban development : A study of Tiruppur, Kannur and Morbi towns*. (Dr M Satish Kumar), Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi.

3. Dhawad, Shriram Pandurangji. *Problems and prospects of monopoly cotton procurement scheme in Maharashtra*. (Prof A H Vajre), Department of Economics, Nagpur University, Nagpur.

4. Gill, Jagdeep Kaur. *Supply response of cotton in Punjab in the context of globalization of Indian economy*. Department of Agricultural Economics, Punjab Agricultural University, Ludhiana.

5. Gupta, Ashok Kumar. *Income and employment generation under IRDP and JRY : A comparative analysis in Madhya Pradesh; a case study of Jhabua and Indore Districts*. (Dr A C Minocha), Department of Economics, Barkatullah Vishwavidyalaya, Bhopal.

6. Jayakumar, G. *Structural adjustment and economic development in Jamaica*. (Dr Abdul Nafey), Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

7. Madhava Reddy, C. *Growth of public expenditure and social justice : A changing rural scene in Andhra Pradesh*. (Prof K Malla Reddy), Department of Economics, Osmania University, Hyderabad.

8. Rama Devi, A. *Impact of REC programmes on development and asset formation in rural economy : A study of Nalgonda District in Andhra Pradesh*. (Dr D Vasudeva Rao), Department of Economics, Osmania University, Hyderabad

9. Taywade, Baban Bhauraoji. *A micro study of impact of revised ceiling act on agricultural holdings on production and employment in Wardha District from 1975 to 1990*. (Prof M M Gharpure), Department of Economics, Nagpur University, Nagpur.

Education

1. Ghosh, Sujay. *Citizenship, democratic values and education : A study of secondary schools in two cities*. (Prof Kiran Saxena), Centre for Political Studies, Jawaharlal Nehru University, New Delhi.

2. Padma, B R. *Professional growth of secondary school women teachers in the districts of Chitradurga and Shimoga*. (Dr P Basavakumar), Department of Education, Kuvempu University, Shimoga.

3. Pandey, Govinda. A study of some correlates of interest in Sanskrit. (Prof Subbarayan Peri), Department of Education, Rashtriya Sanskrit Vidyapeetha, Tirupati.

Law

1. De, Anjan. Travel, tourism ecology and law. (Dr Thrity Patel), Department of Law, Nagpur University, Nagpur.

2. Gupta, Subhash Chander. Legal aspects of capital punishment in India. (Dr M K Shrivastava), Department of Law, Barkatullah Vishwavidyalaya, Bhopal.

Management

1. Agarwal, Chandresh. Indo-German trade : An analytical study. (Dr D P Mishra), Department of Management, Devi Ahilya Vishwavidyalaya, Indore.

2. Arora, Vibha. Growth and prospects of food processing industry in Punjab. (Dr Manoj K Sharma), Department of Business Management, Panjab University, Chandigarh

3. Hurria, Charu. A study of organizational restructuring in selected organizations in a region of Northern India. (Dr Meenakshi Malhotra), Department of Business Management, Panjab University, Chandigarh.

4. Jain, Rajendra. Marketing strategies of steel wire industries in Madhya Pradesh. (Dr D P Mishra), Department of Management, Devi Ahilya Vishwavidyalaya, Indore.

5. Jaswal, Girish Chand. Consumer protection in India : Consumer awareness functioning of consumer associations and redressal agencies in Chandigarh. (Dr Satish K Kapoor), Department of Business Management, Panjab University, Chandigarh.

6. Maini, Vandna. A study of job attitude and job problems of women executives in Chandigarh and Ludhiana. (Dr P P Arya), Department of Business Management, Panjab University, Chandigarh.

7. Mamta. Procurements and utilisation of funds in public sector enterprises promoted by PSIDC. (Dr A K Vashisht), Department of Business Management, Panjab University, Chandigarh.

8. Nag, Gopalchandra. Relationship of organisational culture and technological change : A longitudinal study of Siemens India Ltd. (Dr S R Ganesh and Dr Rajiv Gupta), Department of Management, Devi Ahilya Vishwavidyalaya, Indore.

9. Prabhakar Rao, S. Role of Andhra Pradesh Industrial Development Corporation in the industrialisation AP. (Prof Braj Kishor), Department of Management, Osmania University, Hyderabad

Military Studies

1. Sahu, Arvind. Kashmir samasya ka Bhartiya suraksha per prabhav. (Dr Kailash Tyagi), Department of Military Studies, Barkatullah Vishwavidyalaya, Bhopal.

Political Science

1. Arya, Raka. French policy of national nuclear independence, 1981-1994 : Its rationale and relevance to India. (Prof C S Raj), Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

2. Badruddin. Contemporary peace movements in Western Europe and the United States. (Dr K S Jawatkar), Centre for International Politics, Organization and Disarmament, Jawaharlal Nehru University, New Delhi.

3. Chong Kwan Lee. US policy towards the West Pacific with special reference to the Republic of Korea, 1980-1994. (Prof R P Kaushik), Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

4. Minooeifar, Abolfazl. The caucasian states in international politics, 1991 - 1997. (Prof Zafar Imam), Centre for Russian, Central Asian and East European Studies, Jawaharlal Nehru University, New Delhi.

5. Parida, Gunanidhi. A study of Gandhian political philosophy in the context of ecology vs development and conflict resolution. (Prof Kiran Saxena), Centre for Political Studies, Jawaharlal Nehru University, New Delhi

6. Sagorkar, Varsha. Bharat Sri Lanka sambandh, 1947 se vartman tak. (Dr Shakun Shukla), Department of Political Science, Barkatullah Vishwavidyalaya, Bhopal.

Psychology

1. Nagpal, Anita. A study of role stress and organizational commitment in bank managers in relation to their personality, motives, managerial styles and organizational climate. (Dr J M Jerath), Department of Psychology, Panjab University, Chandigarh

2. Opara, Innocent Osita. A study of the Gol-Ecot psycho social factors in coronary heart diseases and hypertension. (Prof J Mohan and Dr Meena Sehgal), Department of Psychology, Panjab University, Chandigarh

Sociology

1. Datta, Anandita. Inter regional gender disparities in the levels of social well being : A comparative study of Uttarakhand Region and Awadh plains. (Dr S Sinha), Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi.

2. Jha, Rakesh Raman. Sociology of peace and non-violence : A critical analysis of the approaches of Mahatma Gandhi and the Dalai Lama towards conflict resolution. (Dr Anand Kumar), Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

3. Makwana, Mukesh Becharbhai. College yuvano ane adhunik mulyo-punah : Samajshastriya sanshodhan. (Dr Ramnik Bhatti), Department of Sociology, Bhavnagar University, Bhavnagar.

4. Rajesh Kumar. Drug addiction and its relapse : A sociological study of drug addicts drawn from Some De, Addiction Centre of Delhi. (Prof J S Gandhi), Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

5. Rajesh, M N. Role of Gumpa in traditional Tibetan society : A thematic study. (Prof Dawa T Norbu), Centre for South, Central, South East Asian and South West Pacific Studies, Jawaharlal Nehru University, New Delhi.

6. Sagar, Alpana Daya. The social basis of outcomes of pregnancy in the Gautam Nagar slum of Delhi. (Prof Imrana Qadeer and Prof D Banerji), Centre for Social Medicine and Community Health, Jawaharlal Nehru University, New Delhi.



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Application form and prospectus will also be available from the National School of Drama Book Shop w.e.f. 15.03.2000 till 30.3.2000 on cash basis.

Completed application form duly filled in by the candidate be sent to the Assistant Registrar (Academics) by 20.04.2000.

The applicants who are applying for the last 3 years and could not qualify the preliminary interview need not to apply. However the candidates who qualifying the preliminary interview but could not clear the final interview during last 2 years may apply.

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2. (i) M.Sc. Agri./Veterinary/Forestry Biotechnology Programmes being offered at Birsa Agricultural University, Ranchi; (ii) M.Sc. (Agri.) M.V.Sc. Biotechnology Programmes at G.B. Pant University of Agri & Technology, Pant Nagar; and (iii) M.Sc. (Agri.) Biotechnology Programmes at Tamil Nadu Agricultural University, Coimbatore.

Eligibility: (i) For Birsa Agricultural University, Ranchi: Bachelor's degree under 10+2+4/5 pattern of education in Agriculture, Veterinary Sciences, or Forestry with at least 55% marks; (ii) For G.B. Pant University of Agriculture and Technology, Pant Nagar: Bachelor's degree under 10+2+3 in Agriculture, Veterinary Sciences, Education in Agriculture, Horticulture, or Forestry with at least 55% marks; and (iii) For Tamil Nadu Agricultural University, Coimbatore: Bachelor's degree under 10+2+4 pattern of education in Agriculture, Horticulture, Forestry OR Agricultural Engineering, with at least 70% marks or equivalent grade.

3. M. Tech (Biotechnology) Programmes at Anna University, Chennai.

Eligibility: Minimum 60% marks or equivalent CGPA in any one B.Tech/B.E. in Chemical/ Biochemical Engg. Industrial Biotechnology, Leather Technology, L.Pharma OR M.Sc. in Biotechnology, Life Sciences, Botany/Zoology, Biochemistry, Microbiology OR Genetics.

FEE/SCHOLARSHIP: Fee shall be charged from the admitted candidates as per the fee structure of the concerned University. Candidates selected for admission in the participating Universities, which are supported by the Department of Biotechnology (Govt. of India) are generally eligible for scholarship at the rates indicated below:

For M.Sc. Biotechnology Programmes: Rs. 400/- p.m.; For M.Sc. (Agri.) Biotechnology Programmes: Rs. 800/- p.m.; and For M.Tech Biotechnology Programmes: Rs. 1800/- p.m. Candidates may please note that the M.Sc. Biotechnology programmes being offered at Punjab University, Chandigarh; Punjab University, Patiala; Pondicherry University, Pondicherry; Thapar Institute of Engineering & Technology, Patiala is currently not being financially supported by the Department of Biotechnology (Govt. of India). The award of Scholarships, if any, shall therefore be governed by the rules prevailing in these Universities.

RESERVATION: Reservation of seats for SC/ST and Physically Handicapped candidates shall be in accordance with the rules of the respective participating Universities. All the SC/ST and PH candidates who have passed the qualifying examination are eligible to apply irrespective of their percentage of marks.

PROCEDURE FOR GETTING THE FORM: Application form, alongwith brochure can be had on cash payment of Rs. 75/- per set by calling personally on any of the participating University as shown above.

How to get the form by post: Those desirous of obtaining Application Form by post should send in their requests only to the Assistant Registrar (CEEB), Jawaharlal Nehru University, New Delhi-110 067, alongwith a Bank Draft of Rs. 100/- (for one set of application form). The Bank Draft should be payable to JAWAHARLAL NEHRU UNIVERSITY, NEW DELHI. The request should accompany a self-addressed unstamped ENVELOPE OF NOT LESS THAN 20x20 cms SIZE INDICATING CLEARLY: APPLICATION FORM FOR: "M.Sc. BIOTECHNOLOGY", OR "M.Sc. (AGRI)/M.V.Sc. BIOTECHNOLOGY", OR "M.TECH BIOTECHNOLOGY".

ISSUE OF APPLICATION FORMS: FROM FEBRUARY 28, 2000 to APRIL 7, 2000. **LAST DATE FOR SUBMISSION OF FORMS:** April 10, 2000.

IMPORTANT NOTE: Please note that there are separate sets of Application Forms for each programme and therefore candidates are advised to apply separately in case they are desirous of applying for more than one programme i.e., (i) M.Sc. Biotechnology Programme, OR (2) For M.Sc. (Agri.) Biotechnology/M.V.Sc. Biotechnology; OR (3) For M.Tech Biotechnology programme.

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INDIAN INSTITUTE OF TECHNOLOGY, MADRAS

Admissions to M.Sc., M.S., M.S. (Sponsored) and Ph.D. Programmes in July 2000

1. M.Sc. Programme : Chemistry/Mathematics/Physics

Minimum Qualification :

1st class or 60% (55% for SC/ST candidates) marks in B.Sc Chemistry/Maths/Physics.

Direct admission to integrated Ph.D. programme in the Department of Chemistry is also available for meritorious B.Sc. Chemistry candidates.

Scholarship : Some full and half tuition fee concessions are available for the meritorious students.

2. M.S. and Ph.D Research Programmes

i Ph.D and M.S. with/without half-time Teaching/Research Assistantship (HTRA) in the areas of Aerospace Eng. Applied Mech (including Biomedical Eng), Chemical Eng (including Biotechnology), Civil Eng, Computer Science & Eng, Electrical Eng, Management (all functional areas including Production, Finance, and Marketing), Mechanical Eng, Metallurgical Eng and Ocean Eng

ii Ph.D with/without half-time Teaching/Research Assistantship in the areas of Chemistry, Maths, Physics, Economics, German, English, History, Psychology and allied areas

Minimum Qualification :

a For Ph.D First class or a minimum of 6.5 CGPA in M.S./M.E./M.Tech/MBA of IIMS or equivalent First class Master's degree in Science, Social Sciences, Commerce and Humanities subjects with a valid GATE score or NET (UGC/CSIR) fellowship

B.Tech/B.E. holders, eligible for M.Tech admission in this Institute in July 2000 on the basis of their GATE score, are also eligible for direct admission to Ph.D. in Eng. areas, provided they are within the top 25% of their branches in IITs or within the top 10 ranks in Universities.

b For M.S. First class or a minimum of 6.5 CGPA in B.Tech/B.E. with a valid GATE score or NET (UGC/CSIR) Fellowship For certain areas of research, first class Master's degree in Sciences and Humanities subjects with a valid GATE score or NET (UGC/CSIR) Fellowship

c Candidates having Associate Membership in Professional bodies like AMIE will also be considered for admission to M.S. programme under HTRA scheme, for their parent discipline, subject to qualifying the examination with first class or 60% in Section 'A' and Section 'B', with a valid GATE Score

d M.S. (Sponsored) programme without assistantship, is offered to candidates sponsored by R&D Institutions/Industries/Engineering colleges recognised by AICTE, with full salary and leave for 18 months. GATE score is not required for sponsored candidates with B.E./B.Tech qualification.

Candidates sponsored for M.S. programme should have a minimum of 2 years experience in the sponsoring Institution/Industry. MBBS candidates with Mathematics in +2 and 2 years research/teaching experience in the sponsoring organisation may also apply for M.S. Sponsored programme in the area of Bio-medical Engineering.

e. External Registration in M.S. and Ph.D. programmes, without assistantship, is available for candidates sponsored by R&D Institution/Industry.

Candidates must possess the minimum qualifications mentioned in para (a) and (b) above. GATE score is not required for M.S. External registration scheme. AMIE and other associateship holders should have valid GATE score. The candidates who wish to apply for Ph.D. in Science and Humanities departments (Chemistry/ Maths/Physics/ Humanities) should have a valid GATE score of NET qualification. Teachers of Universities/ Colleges will not be considered under this scheme. Upper age limit for M.S. and Ph.D. programmes is 35 and 45 years respectively.

3. Opportunities exist for research work in the following Centres :

Bioethnology Research Centre, Materials Science Research Centre, Regional Sophisticated Instrumentation Centre, Composites Technology Centre and Centre for Systems and Devices

4. Opportunities are also available to work in Sponsored Research and Consultancy Projects in the Departments/ Centres as Project Staff, if selected for M.S./ Ph.D. admission

5. Candidates selected for Ph.D. programme with M.S./M.E./M.Tech qualification under Half-Time Teaching / Research Assistantship (HTRA) are eligible for HTRA of Rs. 6000/- p.m. Candidates selected for Ph.D. programmes in Sciences and Humanities disciplines and for M.S. programme are eligible for HTRA of Rs. 5000/- p.m. These amounts will be enhanced after two years based on the progress of the research of the Ph.D. scholars.

Some candidates may also be selected on merit without HTRA, after all the assistantship seats are filled. Such candidates will be considered for HTRA, if vacancies arise at later semesters.

6. Other Fellowships

Other fellowships sponsored by various industries are also available in certain departments for research.

7. For Application Form

A separate application form should be submitted for each Department. Please write to the Deputy Registrar (Acad.), IIT, Madras, Chennai-600 036 with a demand draft for Rs.200/- (Rs.100/- for SC/ST candidates) drawn in favour of "IIT, Madras" on any nationalised bank payable at Chennai and two address slips (5cm x 10cm) in capital letters. The cover must be superscribed as "REQUEST FOR APPLICATION FOR Ph.D./ M.S./ M.Sc. (Chemistry/ Mathematics/ Physics) PROGRAMME".

This advertisement also appears in our web site : <http://www.iit-m.ac.in>

8. Last Dates :

Request for application forms by post	— 14.04.2000
at the Institute counter	— 20.04.2000
Receipt of completed application forms	
at the Institute	— 20.04.2000

Deputy Registrar (Acad)



MAHATMA GANDHI DENTAL COLLEGE AND HOSPITAL PONDICHERRY

Advt. No.4/1999-2000

Dt. 24/02/2000

EMPLOYMENT NOTIFICATION

MAHATMA GANDHI DENTAL COLLEGE AND HOSPITAL (MGDCH) which was originally named as PONDICHERRY DENTAL COLLEGE has been established by PONDICHERRY ADMINISTRATION in September, 1990 as an autonomous Institution of the GOVERNMENT OF PONDICHERRY and is administered by a constituted BOARD OF GOVERNORS headed by the CHIEF SECRETARY TO GOVERNMENT OF PONDICHERRY. The Institution has now been completely shifted to its New Campus at INDIRA NAGAR, GORIMEDU, PONDICHERRY and is being developed as a fully residential complex.

Within a short span of 9 years, MGDCH has become one of the best institutions in the Country with well equipped Govt. General Hospital, Clinics and Laboratories and strongly committed to achieve excellence in Dental Education and Research with the ultimate goal of achieving the "Best Dental Institution in the Country"

The College is recognised by the DENTAL COUNCIL OF INDIA, New Delhi and has been accorded PERMANENT AFFILIATION to the PONDICHERRY UNIVERSITY (a Central University).

The Post Graduate Courses in three specialities have commenced from the academic year 1999-2000.

Applications are invited on plain paper with full Bio-Data to the posts mentioned below :

Sl. No.	Name of the speciality	Assistant Professor	Lecturer
MEDICAL			
1.	Pharmacology	1	1
Total		1	1

ESSENTIAL QUALIFICATIONS

Essential Qualifications and Experience etc. shall be as prescribed by the Medical Council of India.

SALARY

ASST. PROFESSOR :RS. 12,000-420-18,300

LECTURER :Rs. 8,000-275-13,500

AGE LIMIT

ASST. PROFESSOR :45 years and below.

LECTURER : 35 years and below.

Relaxable in the case of SC/ST/OBC candidates as per rules.

- * M.D./Ph.D. or equivalent degree should be from a University recognised by UGC.
 - * The candidates called for Interview will be paid Traveling Allowance @ I class rail fare subject to production of rail tickets through shortest route, or actual fare paid whichever is less.
 - * The number of posts may increase or decrease at the time of selection.
 - * The candidates with lesser/higher qualification/experience may be considered for lower/higher posts at the discretion of the Selection Committee.
 - * All other allowances and retirement benefits etc are as applicable to the Central Government Officials.
 - * Pay protection will be offered to the deserving candidates.
 - * The selection committee may also consider extra increments to the highly qualified and deserving candidates.
 - * All teaching experience should be in recognised Dental/Medical Colleges.
 - * Application received from SC/ST/OBC Candidates will be considered as per Government Rules/Orders etc.
 - * Non-Practising Allowance, if sought will be admissible as per Government Rules/Orders etc.
 - * Non-Practising Allowance, if sought will be admissible as per Government Rules for Medical/Dental graduates only.
 - * Candidates employed in Govt. Autonomous/Government/University/Institutions may apply through proper Channel. An advance copy may be submitted.
 - * Qualification, Experience and other requirements must be supported by relevant documents.
 - * Application which are incomplete or without required testimonials/certificates etc. shall be rejected straight away and no correspondence will be entertained in this regard.
 - * Completed applications in all respects with 2 Photographs, attested copies of certificates, number of attempts in which the candidate passed the degree (MBBS/MD, etc.), other testimonials including teaching experience after MD/Ph.D and Date of Birth, etc. should reach the PRINCIPAL, MAHATMA GANDHI DENTAL COLLEGE AND HOSPITAL, INDIRA NAGAR COMPLEX, PONDICHERRY-605 006" on or before 27.03.2000. The Application should be sent in an envelope superscribed as "APPLICATION FOR THE POST OF...." This Institution shall not be responsible for any postal delay.
 - * Mere fulfilling the qualification and applying for the post advertised herein does not itself automatically entitle an applicant to be called for interview. The application will be short-listed for the purpose and decision of a duly constituted screening committee shall be final. No correspondence shall be entertained in this regard.
- "CANVASSING IN ANY FORM WILL BE CONSIDERED AS A DISQUALIFICATION"**

(BY ORDER OF THE CHIEF SECRETARY TO GOVERNMENT/
CHAIRMAN, BOARD OF GOVERNORS, MGDCH)
DR. SHYAM SINGH
PRINCIPAL

Ministry of Science & Technology

Department of Science & Technology

SCIENCE AND ENGINEERING RESEARCH COUNCIL

FAST TRACK PROPOSALS FOR YOUNG SCIENTISTS 2000-2001

The Science and Engineering Research Council (SERC), Department of Science & Technology, in order to provide quick research support to young scientists below the age of 35 years, has introduced a new fast track mechanism. Scientists will be encouraged, under the scheme, to pursue research of high standard in frontier areas of science and engineering, subject to peer review. Funding under this programme will be limited to a sum up to Rs. 10 lakhs, which will include recurring costs (Salary, consumables, travel and contingency) and equipment less than Rs. 5.00 Lakhs). Scientists, if not holding regular positions, can draw a fellowship of Rs. 15,000/- per month. The support will be provided for a period not exceeding three years.

Eligibility : Candidates should possess Ph.D. in science/engineering or Masters in engineering/technology or MD in medicine or equivalent. The scheme is open to young scientists who are below 35 years as on December 31, 2000.

Applications are invited in the prescribed format given below. 5 copies of the application may kindly be sent to Dr. R.C. Srivastava, Scientist --- G, SERC Division, Department of Science & Technology, New Mehrauli Road, New Delhi-110 016 on or before April 15, 2000. Applications received after the due date will not be considered.

Format for Application

- 1 Broad subject area (Life Sciences, Physical Sciences, Chemical Sciences, Earth & Atmospheric Sciences, Mathematical Sciences, Engineering Sciences) :
- 2 Specialization :
- 3 Title of the proposed project :
- 4 Details of the proposed project to be undertaken :
 - * Research work engaged in at present
 - * Objectives of the proposed project
 - * Review of R&D in the proposed area
 - * Work plan including methodology and time schedule
 - * Future plans
 - * Details of the research funding received in the past
- 5 Name and address of the institution where the proposal will be executed :
- 6 Details of financial requirements for three years and phasing for each year.

S.No.	Head	1st year	2nd year	3rd year	Total
1.	Salary (Designation, Monthly emoluments)				
2.	Consumables				
3.	Travel				
4.	Contingency				
5.	Minor Equipment (Name, Cost)				
6.	Other items, if any				

7. Any other information in support of the proposed project :

Brief Bio-data

- 1 Name of the Applicant :
- 2 Mailing Address (Indicate Telephone, Fax, E-mail, etc.)
- 3 Date of Birth :
- 4 Educational Qualifications (Starting from Graduation onwards) :

S.No.	Degree	University	year	Subjects	Percentage
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5. A. Details of professional training and research experience, specifying period and list of significant publications during the last five years.
- B. Details of employment
6. Professional recognition, awards, fellowships received.
7. Any other information.

Signature of the applicant
Date :

This advertisement is also available on the Internet at : <http://www.aic.in/snt/newa.htm>

davp 99/786 -

INDIAN COUNCIL OF MEDICAL RESEARCH

Applications are invited upto 31st March, 2000 for the following posts at the Council's Institute/Centre:

(A) REGIONAL MEDICAL RESEARCH CENTRE, PORT BLAIR: Deputy Director (Medical) (One post) (Scale of pay of Rs. 14300-400-18300).

Qualifications & Experience: *Essential:* (a) MBBS with 12 years experience of Teaching/Research in fields like Microbiology/Medicine/Community Medicine/Communicable Diseases or 10 years experience for candidates possessing M.D. in relevant field. (b) Original research work as evidenced by publications in standard journals. *Desirable:* Research experience in the field of leptospirosis/Hepatitis/Diarrhoeal diseases and Tribal health. **Job Requirements:** To plan research programmes, draft proposals and undertake research on different aspects of communicable diseases especially Leptospirosis, Diarrhoeal diseases and Hepatitis. Besides these the incumbent will have to assist the Director in Planning, executing and monitoring other activities of the Centre including administrative matters as and when required.

(B) NATIONAL INSTITUTE OF NUTRITION, HYDERABAD: Asstt. Director (Molecular Biology) (One post) (Scale of pay of Rs. 12000-375-16500).

Qualifications & Experience: *Essential:* First class M.Sc. in Biochemistry/Life Sciences with 12 years research/teaching experience in Molecular Biology (10 years in the case of candidates possessing Ph.D.) Original research contribution as evidence by publications. Candidates having research experience in Molecular Biology/Cancer/Toxicology/Cytogenetics will be preferred. **Job Requirements:** To assist in the investigations on the mechanism of cancer and development of Chemo-preventive agents and allied fields.

(C) RAJENDRA MEMORIAL RESEARCH INSTITUTE OF MEDICAL SCIENCES, PATNA: Assistant Director (two Posts) (Scale of pay of Rs. 12000-375-16500).

(I) ASSISTANT DIRECTOR (BIOCHEMISTRY):

Qualifications & Experience: *Essential:* (a) MBBS or 1st class M.Sc. (Biochemistry) with 12 years research/teaching experience in the field of Biochemistry related to parasitic diseases or M.D./Ph.D. in Biochemistry Degree with 10 years research/teaching experience in relevant fields. (b) Original work as evidence by publication in related subject. *Desirable:* Documented research (Published) work experience in Molecular Biology/Biochemistry like isoenzyme studies RNA/DNA probe analysis, assay of anti-kala-azar drugs level in biological specimen, other bio-chemical tests etc. in visceral leishmaniasis or in other parasitic diseases. **Job Requirements:** The incumbent is required to plan, carry out research, analysis data, report biochemical research studies related to leishmaniasis plus any other duty assigned by the Director.

(II) ASSISTANT DIRECTOR (EPIDEMIOLOGY):

Qualifications & Experience: *Essential:* MBBS with 12 years research/teaching experience in the field of the communicable diseases or M.D. in Community Medicine/Public Health/Preventive and Social Medicine with 10 years research/teaching experience in Communicable Diseases. *Desirable:* Work experience in epidemiological aspects of Kala-Azar. **Job Requirement:** The incumbent is required to plan, carry out analysis and report, epidemiological research studies and control strategies in Leishmaniasis.

(D) NATIONAL INSTITUTE OF EPIDEMIOLOGY, CHENNAI:

Asstt. Director (Epidemiology) (One post) (Scale of pay of Rs. 12000-375-16500).

Qualifications & Experience: *Essential:* MBBS or (1st class) Master's degree in Behavioural Science/Auxiliary Medical Science/Bio-Statistics/Health Economics with 12 years research/teaching experience in the field of Epidemiology/Community Medicine/Preventive and Social Medicine/Public Health or M.D./Ph.D. in preventive and Social Medicine and in the above mentioned disciplines with 10 years research/teaching experience in epidemiological work. *Desirable:* Training and experience in Epidemiology. **Job Requirement:** The incumbent is required to plan, carry out analysis and report, epidemiological research studies and control strategies in communicable disease and Non-Communicable disease. He/She will also be responsible for developing various training courses in epidemiology to be conducted by the Institute.

(E) REGIONAL MEDICAL RESEARCH CENTRE FOR TRIBALS, JABALPUR: (a) Asstt. Director (Two posts) (Scale of pay of Rs. 12000-375-16500)

(I) ASSTT. DIRECTOR (MEDICAL):

Qualifications & Experience: *Essential:* (a) M.B.B.S. with 12 years research/teaching experience or M.D. (Medicine/Paediatrics) with 10 years research/teaching experience in relevant field. (b) Original research work as evidenced by publication in standard journals. *Desirable:* Research experience in the field of tribal health especially in Haemoglobinopathies, particularly Sickle Cell Disease and communicable diseases. **Job Requirements:** The candidate will be required to actively participate in the ongoing research projects in the Centre. He/She will be expected to plan research programmes, draft proposals and undertake research on different aspects of tribal health. The job requires traveling in tribal areas.

(II) ASSISTANT DIRECTOR (PATHOLOGY/MICROBIOLOGY):

Qualification & Experience: *Essential:* (a) M.B.B.S. with 12 years research/teaching experience or M.D. (Pathology/Microbiology) with 10 years research/teaching experience in relevant field. (b) Original research work as evidenced by publication in standard journals. *Desirable:* Research experience in the field of tribal health and communicable & non-communicable diseases. **Job Requirements:** The candidate is expected to formulate and carry out & guide research programmes in the field of communicable diseases and tribal health. The job requires traveling in tribal areas.

(b) SR. RESEARCH OFFICER (three posts) (Scale of pay of Rs. 10000-325-15200).

(I) SR. RESEARCH OFFICER (NUTRITION):

Qualification & Experience: *Essential:* (a) M.B.B.S./M.Sc. 1st class in (Applied Nutrition) with six years research/teaching experience in the relevant field. (b) Original research work as evidenced by the publication in standard journals. *Desirable:* Diploma/degree in nutrition from recognized Institute/University for medical candidates. Research experience in the field of tribal health and nutrition. **Job Requirements:** To plan and undertake research in tribal health and nutrition. The candidate is expected to participate actively in the ongoing research projects in the Centre. The job requires traveling in tribal areas.

(II) SR. RESEARCH OFFICER (DEMOGRAPHY):

Qualification & Experience: *Essential:* First class Master Degree in Demography/Statistics/Anthropology with at least 6 years experience or Ph.D. on a topic related to demographic aspects with 2 years experience of formulating/ conducting demographic surveys preferably among the tribals. **Job Requirements:** (i) To plan/ conduct demographic surveys in the tribal population (a) to help fellow researchers in explaining socio-demographic behaviour of the tribals in relation to their health problems. The job requires travelling in tribal areas.

(III) SENIOR RESEARCH OFFICER (MICROBIOLOGY):

Qualification & Experience: *Essential:* MBBS/1st class M.Sc. in Microbiology with 6 years research/teaching experience (2 years in case of candidates possessing M.D./Ph.D. in Microbiology). *Desirable:* M.D./Ph.D. in Microbiology with experience in Microbiological aspects of yaws, sexually transmitted diseases, tuberculosis, diarrhoeal diseases, leishmaniasis and other communicable diseases prevalent in tribal areas. **Job Requirements:** To participate in planning and implementation of research in the Microbiology and related fields and the part of a multi-disciplinary team to investigate health issues to tribal population.

(F) REGIONAL MEDICAL RESEARCH CENTRE, DIBRUGARH:

Sr. Research Officer (One Post) (Scale of pay of Rs. 10000-325-15200).

Qualifications & Experience: *Essential:* MBBS/1st class M.Sc. in Biochemistry/Foods & Nutrition with 6 years research/teaching experience in the field of Biochemistry/Molecular Biology/Community Nutrition. *Desirable:* Candidate possessing M.D./Ph.D. in Biochemistry/Foods & Nutrition. 2 years research/teaching experience in the above fields is required. *Desirable:* Experience in Molecular Biology/Biotechnology. **Job Requirements:** The incumbent will be required to carry out research programmes on molecular epidemiology nutritional problems among the rural and tribal populations of the region. The candidate will also be responsible for planning and supervising the field work.

(G) INSTITUTES OF IMMUNOHAEMATOLOGY, MUMBAI: Sr. Research Officer (Medical) (One Post) (Scale of pay of Rs. 10000-325-15200).

Qualifications & Experience: *Essential:* MBBS with six years research/teaching experience in the subject of Immunohaematology/Haematology. *Desirable:* M.D. or equivalent qualification in Internal Medicine/Paediatrics with two years research/teaching experience in Immunohaematology/Haematology. (ii) Research publication in the above fields. **Job Requirements:** To assist in planning research in the field of Immunohaematology/Haematology.

(H) REGIONAL OCCUPATIONAL HEALTH CENTRE, BANGALORE UNDER NIOH, AHMEDABAD:

Sr. Research Officer (Biochemistry) (One Post) (Scale of pay of Rs. 10000-325-15200).

Qualification & Experience: *Essential:* 1st class M.Sc. inorganic chemistry/Bio-chemistry with 6 years research/teaching experience in related field or 2 years research/teaching experience in case of candidates possessing Ph.D. in Organic chemistry/biochem. *Desirable:* (a) Experience in Molecular Biology/Biochemistry and handling of sophisticated equipments. (b) Original research work as evidenced by publication. **Job Requirements:** Planning & conducting studies in the field of Bio-chemistry/Molecular Biology related to the Occupational/Environmental Health.

Age: Below 50 years for the post of Deputy Director and below 45 years for the post of Asstt. Director and Sr. Research Officer. SC/ST/OBC and departmental candidates are allowed relaxation in accordance with Central Govt. Rules in force. Benefits of pension admissible. Private practice not allowed but Non Practising Allowance (NPA) as per rules of the Council is admissible only to those with medical degrees. Application forms and other information are obtainable from the Director General (Personnel Section), Indian Council of Medical Research, Post Box No. 4911, Ansari Nagar, New Delhi-110029, with a crossed Indian Postal order (IPO) for Rs. 5/- payable to Director General, ICMR, New Delhi. (SC/ST/departmental candidates are exempted from this payment). Incomplete/late applications or those without postal orders will not be entertained. Any canvassing by or on behalf of the candidates or to bring political or other outside influence with regard to selection/recruitment shall be a disqualification.

Note: Requirement of 1st class M.Sc. will be relaxable in appropriate cases of candidates who are possessing Ph.D. Degree/equivalent degree in related subjects. In the event of non availability of suitable candidates for advertised posts, the position can be filled up at lower level. Since it is not possible to call all the eligible candidates for the interview/personal discussion, the applicants will be short listed for this purpose. The decision of Director General will be final in this regard. The above posts are with all India transferability under the Council. Candidates who have already applied for the post of Assistant Director (Molecular Biology), National Institute of Nutrition, Hyderabad in response to earlier advertisement (Jan-Feb. 1999) need not apply again. However, they may update their Bio-Data if there is any change.

For activities of the above mentioned ICMR Centres/Institutes, please refer to the ICMR web site at <http://icmr.nic.in>.

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NATIONAL INSTITUTE OF RURAL DEVELOPMENT

(An Organisation of the Ministry of Rural Development, Govt. of India)
Rajendranagar, Hyderabad - 500 030
Telefax : 040 - 4015029 E-mail : ddgnird @nird.ap.nic.in
Website : www.nird.org

National Institute of Rural Development in collaboration with Ministry of Rural Development, Govt. of India and UNDP proposes to commission short duration Research Studies (5-6 months) on the following subjects in Schedule V Areas of Andhra Pradesh, Bihar, Gujarat, Himachal Pradesh, Madhya Pradesh, Maharashtra, Orissa and Rajasthan

S. No.	Title of the Study	Coverage States
1	Impact of State Legislation on the Empowerment of Gram Sabha	A.P., M.P., Maharashtra & Orissa
2	Documentation on People's Movement	A.P., Bihar, M.P. & Orissa
3	Study of Alienation of Tribal Lands	A.P., Bihar, M.P. & Orissa
4	Incidence of Indebtedness among Tribals	A.P., Bihar, M.P. & Orissa
5	Survey and Settlement and Land Reforms	A.P., Bihar, M.P. & Orissa
6	Impact of Forest Laws on Livelihood System with particular reference to tribal customs and natural resources	A.P., Bihar, M.P., Maharashtra & Orissa
7	Study of Customary Mode of Dispute resolution	A.P., M.P. & Orissa
8	Role of Micro level NGOs in the Implementation of Development Programmes	A.P., Bihar, M.P. & Orissa
9	Emerging Patterns of Leadership	A.P., M.P., Maharashtra & Orissa
10	Training Needs Assessment of Elected Representatives	A.P., Gujarat, M.P., Orissa & Rajasthan
11	Changing Demographic Patterns	A.P., Bihar, Gujarat, H.P., M.P., Maharashtra, Orissa & Rajasthan

The above studies are to be entrusted only to established Scholars/Academic Institutions/ Research Institutions/Universities, etc., in Social Sciences with experience preferably in Tribal areas. In addition to the above study areas, other areas relevant to Tribals can be considered

Interested persons may submit their proposals to the undersigned with the following details, so as to reach within two weeks from the date of advertisement.

- 1 General Profile of the Institute with details of Faculty/Research staff
- 2 Detailed CV of the Faculty to be associated with the Studies
- 3 Research proposals along with sampling design
- 4 Detailed budget proposal and work schedule

DEPUTY DIRECTOR GENERAL

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BUSINESS ENQUIRIES SOLICITED



CLASSIFIED ADVERTISEMENTS

ALIGARH MUSLIM UNIVERSITY ALIGARH (U.P.)

ADVERTISEMENT NO. 4-A/2000
DATED : 15.02.2000

Applications on the prescribed form are invited for the following posts by 31.03.2000.

The number and nature of the posts may vary at the time of interview. The Selection Committee will be authorised to relax the prescribed qualifications if a highly qualified scholar is otherwise found suitable for the post. Higher initial start may be given to candidates possessing exceptional qualifications and experience

Scale of pay

Professor : Rs. 16400-22400 plus allowances

Reader : Rs. 12000-18300 plus allowances

Lecturer : Rs. 8000-13500 plus allowances

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01. PROFESSOR OF PHILOSOPHY, DEPT. OF PHILOSOPHY

02. PROFESSOR OF ARCHAEOLOGY & ANCIENT HISTORY, DEPT. OF HISTROY

03. PROFESSOR OF SOCIAL WORK, DEPT OF SOCIOLOGY AND SOCIAL WORK

04. PROFESSOR OF SHIA THEOLOGY, DEPT OF SHIA THEOLOGY

Qualifications — Essential ;

An eminent scholar with published work of high quality actively engaged in research with 10 years of experience in post-graduate teaching and/or research at the University / National level Institutions, including experience of guiding research at Doctoral level.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

05. READER IN BOTANY, (ECOLOGY/ BIO-STATISTICS) DEPARTMENT OF BOTANY

06. READERS IN ENGLISH, DEPT. OF ENGLISH

07. READER IN LIBRARY SCIENCE, DEPT. OF LIBRARY AND INFORMATION SCIENCE.

Qualifications — Essential :

Good academic record with a doctoral degree or equivalent published work. Can-

didate from outside the University system in addition shall also possess at least 55% marks or an equivalent grade at the Master's Degree level. Eight years experience of teaching and/or research (at least 5 of these years were as Lecturer) and has made some mark in the areas of scholarship as evidence by quality or publications, contribution to educational renovation, design of new courses and curricula.

Desirable Sl. No. 5 Research work of high standard on environmental problems and experience of guiding research.

08. READER IN SUNNI THEOLOGY, DEPT. OF SUNNI THEOLOGY

Qualifications — Essential :

a) A consistently good academic record with Doctoral Degree.

b) Evidence of being actively engaged in Research

c) At least five years teaching experience or Post Graduate classes in Sunni Theology.

OR

a) Fazil of Madarsa (whose degree is recognised by the university) with scholarly published work.

b) Evidence of being actively engaged in research.

c) At least eight years teaching experience of higher classes in a Madarsa whose degree is recognised by the University.

d) Adequate knowledge of English.

09. LECTURER IN ENGLISH, DEPTT. OF ENGLISH

10. LECTURER IN HINDI, (TEMP.) DEPTT. OF HINDI

11. LECTURERS IN SANSKRIT, DEPTT. OF SANSKRIT

12. LECTURER IN SANSKRIT, WOMEN'S COLLEGE

13. LECTURER IN WEST ASIAN STUDIES (GEOGRAPHY), CENTRE OF WEST ASIAN STUDIES

14. LECTURER IN URDU, WOMEN'S COLLEGE

15. LECTURERS IN HISTORY, WOMEN'S COLLEGE

16. LECTURER IN LIBRARY AND INFORMATION SCIENCE (TEMP.) DEPT. OF LIBRARY AND INFORMATION SCIENCE

Qualifications — Essential :

Good academic record with atleast 55%

marks or an equivalent grade at Master's degree level in the relevant subject from an Indian University or an equivalent degree from a foreign University.

Candidates besides fulfilling the above qualifications should have cleared the eligibility test for lecturers conducted by the UGC, CSIR or similar test accredited by the UGC, provided that candidates who have submitted Ph.D. thesis or passed the M.Phil. Examination by 31st December, 1993 are exempted from the eligibility test for lecturers conducted by the UGC, CSIR or similar test accredited by the UGC.

Desirable : Sl. No 16 One year PG Diploma in Computer Applications from a recognized Institution/or an equivalent qualification.

OR

Two years working experience in Computer Applications in Library & Information Services in a recognized Organization.

17. LECTURER IN SUNNI THEOLOGY, WOMEN'S COLLEGE

a) Good Academic record with Ph.D. in Sunni Theology.

OR

Fazil of Madarsa (whose degree is recognised by the University) with at least five years teaching experience of higher classes in Madaras, and Scholarly published work equivalent to Ph.D.

b) Working knowledge of English

B FACULTY OF ENGINEERING & TECHNOLOGY

18. PROFESSOR OF ARCHITECTURE, DEPTT. OF ARCHITECTURE

19. PROFESSOR IN SOIL MECHANICS & FOUNDATION ENGG., DEPTT. OF CIVIL ENGG

Qualifications — Essential :

(i) Ph.D. with 1st class degree at Bachelor's or Master's level in appropriate branch in Engineering/Technology

(ii) 10 years experience in Teaching/ Industry/ Research out of which 5 years must be at the level of Reader or equivalent.

Note: Candidate from Industry/ Profession with recognised Professional work of high standard recognised at National/International level equivalent to Doctorate would also be eligible.

20. PROFESSOR OF APPLIED CHEMISTRY, (SOIL CHEMISTRY/ PHYSICAL CHEMISTRY) DEPTT. OF APPLIED CHEMISTRY

- Qualifications — Essential :**
- (i) Ph.D. with 1st class M.Sc. in appropriate branch.
 - (ii) 10 years experience in teaching/ Industry/ Research out of which 5 years must be at the level of Reader or equivalent.
- Note :** Candidate from Industry/Profession with recognised Professional work of high standard recognised at National/International level equivalent to Doctorate would also be eligible.
21. LECTURER IN APPLIED CHEMISTRY, DEPTT. OF APPLIED CHEMISTRY
- Qualifications — Essential :**
- 1st Class Master's degree in appropriate branch of study.
- Desirable (a) Ph.D. in Chemistry (b) Research experience in the field of Applied Chemistry.**
- C. FACULTY OF MEDICINE**
22. PROFESSOR OF BIO-CHEMISTRY, DEPTT OF BIO-CHEMISTRY
- Qualifications — Essential :**
- M.D. (Bio-Chemistry)/
M.B.B.S. with M.Sc. (Medical Bio-Chemistry)/
Ph.D (Medical Bio-Chemistry)
D.Sc. (Medical Bio-Chemistry)
- Teaching/Research Experience :**
- As Reader in Bio-Chemistry for 04 years in a Medical College
23. PROFESSOR IN COMMUNITY MEDICINE, DEPARTMENT OF COMMUNITY MEDICINE
- Qualifications — Essential :**
- M.D. (Social & Preventive Medicine) / (Community Medicine)
M.D. (Medicine) with D.P.H
- Teaching/Research Experience :**
- As Reader in Social & Prev Medicine for 04 years in a Medical College
24. READER IN COMMUNITY MEDICINE, DEPARTMENT OF COMMUNITY MEDICINE
- Qualifications — Essential :**
- M.D. (Social & Preventive Medicine) / Community Medicine)
M.D. (Medicine) with D.P.H.
- Teaching/Research Experience :**
- As Lecturer in Social & Prev. Medicine for 05 years in a Medical College.
25. READERS IN PHARMACOLOGY, DEPARTMENT OF PHARMACOLOGY
- MD (Pharmacology) /
- MD (Pharmacology & Therapeutics) /
MBBS with M.Sc. (Pharmacology) /
Ph.D. (Medical Pharmacology) /
D.Sc. (Medical Pharmacology)
- Teaching/Research Experience :**
- As a Lecturer in Pharmacology for five years in a Medical College.
26. READER IN OPHTHALMOLOGY, DEPT. OF OPHTHALMOLOGY
- Qualifications — Essential :**
- MS (Ophthalmology),
MD (Ophthalmology)
- Teaching/Research Experience**
- As Lecturer in Ophthalmology for 5 years in a Medical College.
27. LECTURER IN OPHTHALMOLOGY, DEPT. OF OPHTHALMOLOGY
- Qualifications — Essential :**
- MS (Ophthalmology),
MD (Ophthalmology)
- Teaching/Research Experience :**
- Requisite recognised postgraduate qualification in the subject.
28. LECTURER IN BIO-CHEMISTRY (TEMP.), DEPTT OF BIO-CHEMISTRY
- Qualifications — Essential :**
- M.D. (Bio-Chemistry) /
M.B.B.S. with M.Sc. (Medical Bio-Chemistry) /
Ph.D. (Medical Bio-Chemistry) /
D.Sc. (Medical Bio-Chemistry)
- Teaching/Research Experience :**
- Requisite recognised postgraduate qualification in the subject.
29. LECTURER IN COMMUNITY MEDICINE, DEPTT OF COMMUNITY MEDICINE
- Qualifications — Essential :**
- M.D. (Social & Preventive Medicine) / Community Medicine)
M.D. (Medicine) with D.P.H.
- Teaching/Research/Experience :**
- Requisite recognised postgraduate qualification in the subject.
30. LECTURER IN ORAL PATHOLOGY, DENTAL COLLEGE
- Qualifications — Essential :**
- M.D.S. (Oral Pathology) OR
M.D.S. (Oral Medicine)
- Teaching/Research Experience :**
- Requisite recognised postgraduate qualification in the subject.
31. LECTURER IN OPERATIVE, CONSERVATIVE DENTISTRY, DENTAL COLLEGE
- Qualifications — Essential :**
- M.D.S. (Operative)
- Teaching/Research Experience :**
- Requisite recognised postgraduate qualification in the subject.
32. LECTURER IN ANATOMY DEPT. OF ANATOMY
- Qualifications — Essential :**
- M.S. Anatomy/
MBBS with M.Sc. Anatomy/
Ph.D. Medical Anatomy/
D.Sc. Medical Anatomy
- Requisite recognised P.G. Qualification in the subject.
33. DY. DIRECTOR (ARCHAEOLOGY), DEPTT OF HISTORY
- Scale of pay : Rs. 12000-18300 plus allowances**
- Qualifications — Essential :**
1. M.A. in Archaeology/Ancient History and Archaeology/History with specialisation in Archaeology with at least 55% marks, or equivalent grade.
 2. At least 8 years of experience of explorations & excavation in archaeology.
 3. Some published research work of High Standard in Archaeology.
- Desirable**
1. Ph.D. in Archaeology
 2. Knowledge of New Archaeology and experience of working in an Interdisciplinary Team
 3. Experience in Preparation and Publication of Archaeological Reports.
34. NURSING SUPERINTENDENT, J.N. MEDICAL COLLEGE HOSPITAL
- Scale of pay : Rs. 8000-13500 plus allowances**
- Qualifications — Essential :**
- (i) Master's Degree in Nursing
 - (ii) Ten years experience in Nursing Administration.
- D. M.A. LIBRARY**
35. CURATOR, M.A. LIBRARY
- Scale of pay : Rs. 12000-18300 plus allowances**
- Qualifications — Essential :**
1. Master's Degree in Library Science or Documentation.
 2. One year specialisation in Archives and MSS keeping.
 3. 8 years experience as Assistant Librarian in University/College or College Library/

Institution of National Importance at equivalent level.

OR

- 1 B.Lib. Science
2. M A Arabic/Persian/Islamic Studies/Medieval History
3. One year's specialisation in Archives and MSS keeping or equivalent
4. 8 years experience as Assistant Librarian of a University Library/College Library/Libraries of National Importance 4 years of which should be in the MSS division.

Desirable

Master's Degree in Library Science or Ph.D in the area of Arabic/Persian/Medieval History/Islamic Studies.

36. ASSISTANT LIBRARIAN, M.A. LIBRARY

Scale of pay : Rs. 8000-13500 plus allowances

Qualifications — Essential :

- 1 Master's Degree in Library Science with 55% Marks

OR

Master's Degree in Arts/Science/Commerce or equivalent with 55% marks with Bachelor's of Library Science or equivalent

- 2 And must have qualified NET

OR

Ph D or Research Work of equally higher standard and a good academic record with at least IInd Class (C in the seven point Scale) Master's degree in relevant subjects. Relaxation possible as per University norms.

E FINANCE & ACCOUNTS DEPARTMENT

37. SYSTMS MANAGER, DEPTT. OF FI-

NANCE & ACCOUNTS

Scale of Pay : Rs.12000-18300 plus allowances

Qualifications — Essential :

A Master's Degree or Postgraduate Diploma in Computer Science followed by, at least five years experience as Systems Programmer.

Desirable

- 1 Sufficient experience of working in a supervisory capacity in a Computer Centre/Accounting Office.
- 2 At least five years experience of Systems Management, Programming/Development of Project Works. Implementation of already Developed Programmes / Software Packages including Networking of various Units.
3. Sound knowledge and Experience of Working on various latest operating Systems viz NT/Unix/Novel Network.
- 4 Sufficient experience of Development of Packages on RDBMS viz Sybase, Oracle 8/Powerbuilder/Designers forms 8 specially software accounting packages.

F BUILDING DEPARTMENT

- 38 UNIVERSITY ENGINEER, BUILDING DEPARTMENT

Scale of Pay : Rs.12000-18300 plus allowances

Qualifications — Essential :

Candidates should possess at least a Degree in Civil Engineering of a recognised University and should have had at least five years experience as an Executive Engineer or equivalent position in Executing and Supervising construction Project of Roads and Buildings.

Note : For the posts at Sr. Nos. 1, 2, 4, 5, 8, 11, 12, 13, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 30, 31, 34, 35, 36 those who have ap-

plied earlier need not to apply again. They will be considered on the basis of their previous applications, if found eligible. They may however send any additional information about their qualification/experience etc. for consideration if so desire.

Prescribed application forms with instructions may be had either :

- a) Personally from the Reception Counter, Administrative Block, AMU on production of Cash receipt for Rs. 25/- issued by the cash section, Finance Office, A.M.U., Aligarh.

OR

- b) By post from the Assistant Registrar (Selection Committees), Aligarh Muslim University, Aligarh — 202 002, by sending a written request (mentioning the post, Advertisement number and date) with a self addressed stamped Rs. 6/- envelope of 9"x4" size and Demand Draft/IPO for Rs. 25/- payable to the Finance Officer, Aligarh Muslim University, Aligarh-202 002. The cover should be superscribed, on the top left with 'Request for Employment form'.

Complete application form along with cash receipt/Demand Draft/IPO for Rs. 125/- (non-refundable application fee) payable to the Finance Officer, AMU, Aligarh procured in the above manner may either be delivered personally or sent by post, superscribing on the top left of the cover the post applied for, advertisement number and date, to the Assistant Registrar, (Selection Committee), Aligarh Muslim University, Aligarh-202 002, so as to reach him by 31.03.2000.

Important Note : Applications received late or without necessary supporting documents or not accompanied by full prescribed fee or not submitted in the prescribed form shall be rejected summarily.

Prof. H.A.S. Jafri
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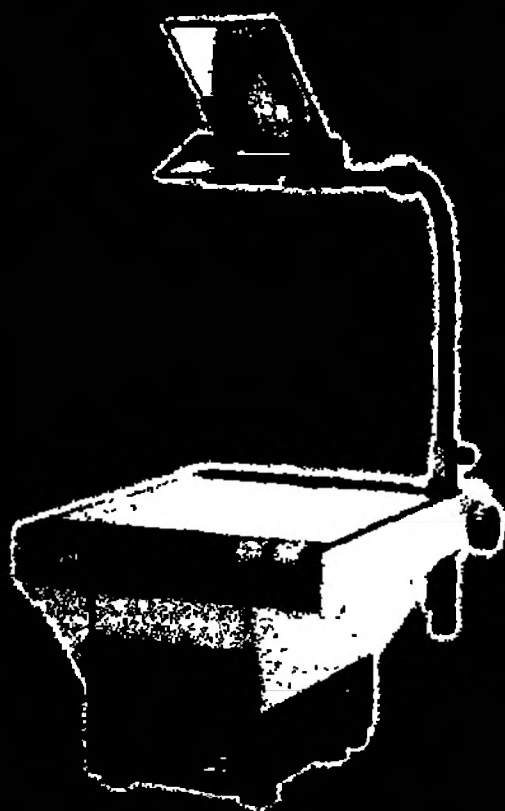
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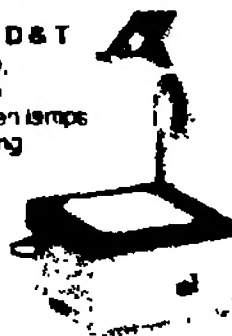
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